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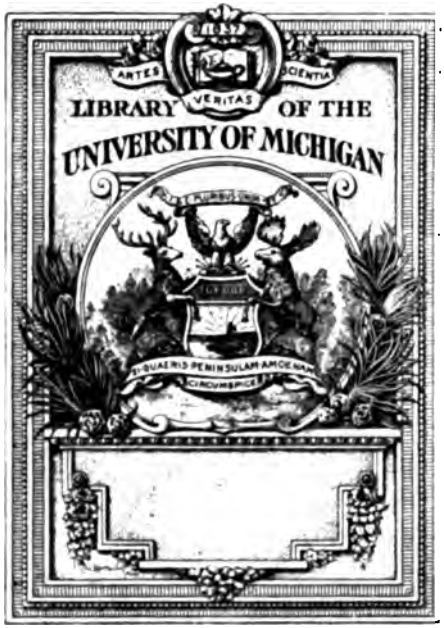
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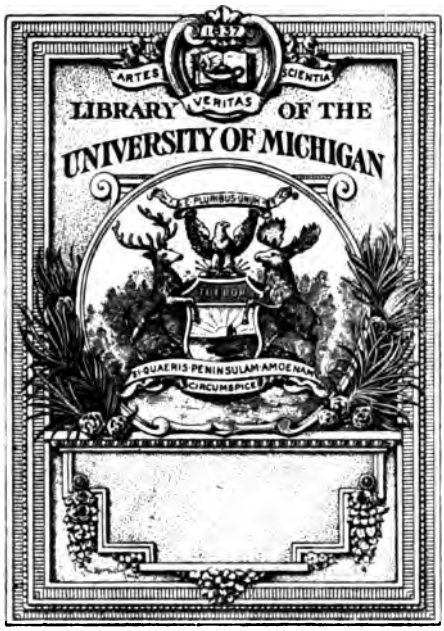
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THE

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A Monthly Record of Medical and Surgical Science.

EDITED BY

GEORGE ROSS, A.M., M.D.,

Professor of Practice of Medicine, McGill University; Physician to the Montreal General Hospital.

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Original Communications.

ABSTRACT OF CLINICAL LECTURE
ON ABDOMINAL TUMORS,

Delivered at the Montreal General Hospital, April 16th, 1888,

BY T. JOHNSON ALLOWAY, M.D.,
Instructor in Gynæcology, McGill University; Assistant Surgeon to the Hospital; Gynæcologist to the Montreal Dispensary.

GENTLEMEN,—For the interesting case before us I am indebted to my colleague Dr. Wilkins, under whose medical care she has been during the past two months. Her history is as follows:

"A. B., aged 18, admitted to hospital Jan. 20th, 1888, cigar maker, nationality Irish, states that she is weak, dyspeptic, and suffers from palpitation; has pains in back: menstruation absent for past two months.

Feb. 2nd.—Noticed abdominal distension, with obstinate constipation during the past week.

Feb. 22nd.—Much distension and headache; some pain during abdominal palpation. Find it impossible to cause bowels to be evacuated with any drug except croton oil. This drug has to be given her every two or three days.

April 16th.—Examined by Dr. Alloway under ether. Previous to examination abdominal measurements were: At umbilicus, 33 inches; between umbilicus and pubis, 34½ inches."

It rests with us now to find out what kind of tumor is giving rise to the abdominal enlargement in this girl. And to do this we must proceed carefully and in a methodical manner. She

states that the enlargement has existed for two months, that it has been of rather sudden formation, and that she does not think it has of late grown any larger. It sometimes, however, becomes altered in size at different periods of the same day. The tumor is tender, giving her some pain on pressure, especially over the epigastrium.

Does this tumor spring from the true pelvis or from the abdominal cavity? Does its growth extend upwards into the abdominal cavity or downwards into the pelvis? Knowledge on this point we will obtain by palpation and percussion. We will now consider how much the tumor affects the symmetry of the abdomen.

On inspection, we see that the abdomen is symmetrically enlarged. Its enlargement extends from the pubis to the sternum, having an equal rotund appearance; there is no bulging of the flanks with flattening of the upper surface. We notice that the normal depression of the umbilicus is not altered, as in solid and fluid tumors distending the abdomen to this extent. The superficial veins are also not to be seen. There are no lineæ albicantes observable.

On measurement, we find that the distance between the sternum and the pubis although somewhat increased in its total length, the umbilicus retains its normal position—about one inch nearer to the pubis than to the sternum—and is about on a level with the highest point of the crest of the ilium on each side, and midway between these two points. This condition we could have in ascites, but in the case of an ovarian tumor there is often considerable alteration in the above measurements.

On palpation, the abdomen feels soft and resilient. On compressing the abdomen firmly between both hands there is no change in density of the tumor, as we get in cases of advanced pregnancy from an occasional systolic contraction and hardening of the uterus. We cannot get a distinct sense of fluctuation in any part of the tumor; no solid moveable body on deep pressure as if within a fluid.

On percussion, we obtain a clear note all over the abdomen to within an inch of the pubis. In fact the whole of the region

of the false pelvis and abdomen is tympanitic on percussion. This clear note extends downwards on each side to the lowest point of the flanks, and it is not altered in character by change of position of patient.

On auscultation, we get no bruit nor fœtal heart ticking, nor aortic sounds or impulse. In fact auscultatory evidence is nil, with the exception of considerable gurgling sounds heard all over the abdomen.

Now that we have made use of the chief methods of physical diagnosis applied in such cases, we will endeavor, through the principal of "exclusion," to arrive at a correct diagnosis in this somewhat obscure case.

Is the girl pregnant? As to age she comes within the range, 15 to 45. She has a voluminous abdomen, but the enlargement is that of pregnancy at full term, and its commencement dates back only two months. We cannot have a nine months pregnancy with a two months history. The patient, it is true, has been for some months in a state of amenorrhœa, but her anæmia would account for that to some extent. The symmetrical rotund appearance of the abdomen on inspection gives the impression of possible pregnancy, but on auscultation, palpation and percussion the evidence of such a condition is positively nil. We may therefore safely exclude pregnancy.

Have we an ovarian, parovarian tumor, or ascites? When an ovarian tumor is large the abdominal enlargement is general, as it also is in ascites. But when of moderate size the enlargement is often partial—more to one side, and more below the umbilicus than above. In ascites, the flanks of the abdomen protrude and the front is flattened or normal. In a simple ovarian cyst the bulging is more in front and inclined somewhat more to one side than to the other. In ascites the change of position of patient produces more immediate change in shape of abdomen, from the ease with which free fluid gravitates to the most dependant part. In ovarian and ascitic dropsy the umbilical depression is obliterated; when, however, there is much ascitic fluid surrounding an ovarian tumor the umbilicus bulges forward. In this case you notice the normal depression is unaltered.

Now as regards the superficial veins, which are not seen in this case, they may in the case of an encysted tumor become prominent. The epigastric veins, seen as a fine network of capillaries, is due simply to absorption of the cutaneous fat, the vessels becoming more prominent and visible through the thinned and distended skin. This condition, therefore, has no diagnostic value. When, however, some of the larger veins in their course from the inguinal region upward run to the hypochondriac and axillary regions, or even up to the clavicles, anastomosing with branches of the axillary, internal mammary and intercostal veins, the impediment to the circulation may be of several kinds: in the heart, the trunk or large branches of the inferior cava. Pregnancy, large tumors or coagula causing obstruction in any of these vessels will throw the circulation into the superficial veins.

Movement on respiration often gives us information in these cases. In the case of an ovarian cyst, on deep inspiration the tumor may be seen to rise and fall. In ascites this characteristic sign does not occur unless a coil of intestine is much distended and moves with the diaphragm, but percussion will discover the error.

In the case of an ovarian tumor, percussion would give us a dull note in front and clear at the flanks. In ascites, a clear note in front and dull in the flanks, and these signs would alter with change of position of patient. It will also change with the degree of pressure exerted on the part percussed, and with the height to which the shoulders of the patient have been elevated. In both we get fluctuation, which in the case of ascites varies with the position of patient. In the case before us we can obtain no such sign.

We are now reduced, as you see, to pretty narrow limits as regards diagnosis; to clear up matters we will anæsthetize the patient and employ the bimanual method. Now, gentlemen, we find that the supposed tumor has entirely disappeared, and that the enlarged abdomen has become as flat as can be. The uterus I find measures 5 cm., and no evidence of a pelvic tumor or other abnormal condition. We will now withdraw the anæsthetic and

allow the patient to return to sensibility; and we notice that the abdomen begins to enlarge again gradually until it has reached its usual prominence. We now feel justified in making a diagnosis of "phantom tumor" or hysterical tympanites. This condition is peculiar to hysterical women, and is most frequently accompanied with a bowed condition of the lumbar region, called "lordosis," supposed to be due to an hysterical spasm of the psoas muscle. In many cases we also have a distinct wavy tremor passing along the abdominal surface when the patient is being examined. This phenomenon was first noticed by Osler of Philadelphia. Instances have been reported where such cases have been operated upon for ovarian tumors. Simpson reports no less than six cases, and Bright reports the case of a woman who entered Guy's Hospital with an unhealed incision in the centre of the abdomen. She had a distended abdomen, and was recognized as an hysterical patient formerly under the care of Dr. Marcet. Sir Spencer Wells, in his book on Abdominal Tumors, reports some interesting cases of this strange disease having come under his observation.

In my next lecture, gentlemen, it is my intention to show you another case of abdominal enlargement of a not less interesting, though very different character.

REPORT ON DISEASES OF CHILDREN.

By A. D. Blackader, M.D.,
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During the past twelve months some important contributions have been made to our knowledge of the etiology of summer complaint in infants. One of the most important has been the discovery by Dr. Victor Vaughan, of Ann Arbor, of tyrotoxicon, a poisonous substance produced in milk under favorable circumstances by the action of an organized ferment—apparently the clostridium butyricum of the butyric ferment, or if not it, one frequently developed in association with it. This poison was first discovered in some cheese and afterwards in some specimens of milk and ice cream that had produced symptoms of acrid poisoning in those that had partaken of them. Since then it has been

isolated and its properties examined by several chemists, who have corroborated Dr. Vaughan's statements. It is apparently one of the diazo-benzol salts. In small doses it induces severe vomiting and purging; the first stools are fæcal, but the subsequent ones are serous, like rice-water in appearance, and alkaline. With the continued administration of small doses from day to day the vomiting and diarrhœa continue, leading to rapid emaciation and death. The post-mortem appearances are very similar to those found after death from cholera infantum, the mucous membrane of stomach and small intestine being blanched and somewhat softened. The conditions favoring the production of tyrotoxicon in milk are a comparatively warm temperature, 98° to 100°, with the exclusion or only limited supply of air, and any conditions of uncleanliness or impurity in the milk. Simple souring of the milk is produced by the lactic acid ferment, which decomposes part of the milk sugar into lactic acid. This change of itself could scarcely be deleterious, but, frequently associated with the lactic acid fermentation, we have an accompanying weak butyric fermentation with the formation of small amounts of this tyrotoxicon. Hence, clinically, we frequently find the use of sour milk by infants followed by diarrhœa.

Prof. Vaughan says (*Med. News*, June 18, 1887) that we have evidence for believing that this poison is an important factor in the causation of cholera infantum and similar diarrhœas of children—the violence of the attack varying with the amount of the poison present. When we remember that these diseases are most prevalent among the poor classes of our large cities where fresh milk is almost unknown, we can readily understand their frequency. By such people milk is often not obtained until it has begun to sour; it is then kept at a high temperature, and often in a most foul atmosphere. In this state it is fed to little ones depressed by poverty and everything that poverty means. Moreover, we all know from actual observation how little attention is given to the food of children. Cows stand and are milked in filthy barns and yards; their udders are not generally washed before milking, and the vessels in which the milk is kept are not as clean

as they should be. In bottle-fed infants, also, very defective care is given to the bottles, and crusts of decomposing milk accumulate round the neck of the bottle and in the tube and nipple, and lead to the rapid decomposition of the entire contents. One of the most important advantages secured to breast-fed children arises, Dr. Vaughan thinks, from the lessened dangers of their milk being infected with germs which may produce these poisonous ptomaines. He does not claim that decomposed milk is the sole cause of the summer diarrhœas of children, nor that tyrotoxicon is the only poison that may be developed in milk. It is only one of a large class of bodies which are produced by putrefaction, and many of these are cathartic in action.

Dr. Christopher of Cincinnati (*Med. News*, March 3, '88) also writes: "From clinical studies I am inclined to believe that tyrotoxicon is not the sole cause of summer complaint, though a frequent one, but that there are other ptomaines and other chemical products concerned." But it is not alone with such poisonous ptomaines as may be formed outside of the body that we have to do. We are all aware of the fact that the butyric acid ferment frequently does develop in the stomach, probably through the ingestion of food already tainted or adherent to food otherwise perfectly pure. Given such a fermentation once started in the intestine, the constant ingestion of albuminous, and especially of milk, food by the infant, supplies the means of keeping it up, while the surrounding conditions of heat and moisture and the paralyzed state of the secretion of gastric juice accompanying these conditions, make the intestine a culture ground in which such ptomaines are rapidly developed. "The ptomaines most frequently produced under these circumstances act like hydragogue cathartics, others act more particularly on the large intestine, and possibly some are concerned in the production of fevers."

Another fact that has been brought forward lately, of the exact importance of which we are not yet able to judge, is the part played by some species of bacteria in assisting digestion. M. Pasteur has made experiments on seventeen species found in the mouth. Of these many were found to act on starch,

changing it into glucose, and others on albumens, changing them into peptones. Among these, six resist for more than twenty-four hours the action of the gastric juice at the temperature of the body, while the bile and pancreatic juice have no distinct action on them. Vignall, in corroborating these experiments, says the action throughout the alimentary canal must be considerable, for a series of numerations showed that there were more than twenty millions in a decigramme of fæcal matter, six species of which were similar to some found in the mouth, but most were of different species. How much assistance these bacteria of health may render, and how much their action may be changed by pathological conditions, must still be a matter of speculation.

In what way has the knowledge of these poisonous ptomaines affected our treatment of these diarrhœas? Principally by distinctly emphasizing certain of the results of our previous clinical experience. It is obvious that the cleansing of the alimentary tract as far as possible from this fermenting matter by a smartly acting purgative must be our first step. For this purpose the treatment of every case should be begun by a full dose of castor oil or a powder containing calomel and soda.

At the same time all further administration of milk, as being an effective medium out of which the ferments can manufacture these poisons, must be stopped until we feel assured we have no longer to dread the action of these germs. It is well in some cases where the stomach is irritable to allow it a complete rest for several hours. Then one of the following foods may be given in small quantities: barley or rice-water, toast-water, egg-albumen water, mutton or chicken broth. Jacobi recommends the following mixture as being useful at the time: 5 oz. barley-water, 1 to 2 drachms old whiskey, white of one egg well mixed, and a little salt and sugar added; later on, an equal quantity of mutton broth may be added to this recipe. Another formula for a food to replace milk is the following by Foreschi: Dried egg albumen, 3¼ drachms; oil of sweet almonds, 8¾ drachms; sugar of milk, 10 drachms; carbonate of soda, 8 grains; chloride of sodium, 6 grains; neutral phosphate calcium, 40 grs.; water to one quart. Make an emulsion.

The amounts to be given of any of these foods and the frequency of administration must be determined by the powers of the stomach to retain and digest them. In all severe cases it appears advisable to assist gastric digestion by the administration of pepsin in some form.

As these germs, so far, have been found to develop only in acid media, it is wise to give antacids to maintain alkalinity, and probably none is superior to carbonate of lime in the form of chalk mixture, to which carbonate of bismuth may be added. The dose must be large enough to be effective, and repeated frequently. Much yet has to be learned regarding the powers of the several germicides. Sodium salicylate, owing to the strong recommendations of Dr. Emmet Holt, was largely used last year. And in the out-patient department of the Montreal General Hospital my results from its use were in general good. In full doses frequently repeated, it occasionally produced symptoms of cardiac depression, and increased the irritability of the stomach. Jacobi prefers resorcin, giving gr. iv to x per diem in solution, or as a constituent of powders. Starr and Keating, and many European writers, prefer naphthalin, which they give in half to one-grain doses every two hours, in powder or suspension, flavored with coffee or aromatics. Salol has been used with benefit by Forchheimer of Cincinnati, but has not seemed to fulfil first anticipations.

[Since writing the above, Dr. Vaughan has given us some results of his further investigations, and in an address before the New York Academy of Medicine (*Med. News*, June 9, '88) says: "One of the surest methods of destroying the life of any plant or animal is to withdraw all the sources of food supply. Germs in the intestine of a child may be destroyed in this way. Escherich has shown by actual demonstration that the bacteria normally present in the stools and intestines of the young fed upon milk disappear wholly and speedily when the administration of milk is stopped and a meat diet is substituted. A radical change in diet is therefore one of the most certain methods of changing the nature of the bacteria. Some thrive in a given medium, but when the medium in which they exist is changed,

they find that the new conditions of life influence their rate of growth and reproduction. If the new conditions are unfavorable to the old resident, it is displaced by an invader; or if it grows it may lose its virulence in the new medium and be no longer able to elaborate the chemical poison or ptomaine. . . . In a large number of experiments I have invariably found that a small quantity of milk containing tyrotoxicon added to any quantity of good milk will soon render the whole poisonous, but when added to beef-tea or solution of egg albumen, the amount of chemical poison is not increased." In another series of experiments which were made to determine the value of certain germicides in the destruction of the tyrotoxicon germ, it was found that one part of mercuric chloride to 24,000 parts of milk is sufficient to destroy its activity. One part of sodium salicylate to about 200 of milk was also effective, as was resorcin in the same proportions, but naphthalin in this strength was wholly without effect.]

The action of these germicides may be powerfully assisted by copious enemata to wash out the large bowel. Dr. Booker recommends a Nelaton's catheter attached to a fountain syringe, which should be introduced gently, as high up into the rectum as possible, and a gentle steady stream be kept up until the water returns clear. The water may be rendered more antiseptic by the addition of some germicide, such as salicylic acid or sodium benzoate. Ehring (translated in *Arch. Pediatrics*, May, '88) recommends washing out both of the stomach and large bowel in these cases, and says that the tube in the throat and stomach gives very little trouble even to the youngest infants, and is only contra-indicated in very feeble children and in impending collapse. The best position for irrigating the intestine is the knee-elbow, but as this is impracticable in very small children, the dorsal decubitus is recommended with an inclination to the right side.

So long as our object is to relieve the bowel of poisonous ptomaines and irritating germs, so long must opium be withheld or given very sparingly. Later on it may be advisable to give it to moderate pain and diminish excessive peristalsis and secretion.

In addition to the above treatment, should excessive secretion continue, and the infant suffer from abundant serous discharges, more powerful astringents may be given, such as aromatic sulphuric acid, nitrate of silver, or acetate of lead. Astringents should also be used in enemata.

In the way of prevention, the following precautions are of manifest value :—

1. The careful regulation of the feeding of infants, especially such as are bottle-fed, conserving their powers of digestion as far as possible by regularity in the amount and hours of feeding. Infants and children should not be given milk to assuage thirst, but should have pure water, either filtered or boiled, offered to them freely between their hours of feeding. Parents should be taught to consider milk as a food only to be given at meal hours, not as a drink to be gulped down rapidly on an exhausted stomach.

2. The value of careful general hygiene cannot be over-estimated.

3. As milk must necessarily form the greater part of an infant's food up to the age of two years, the following rules laid down by Prof. Vaughan should receive attention: Cows should be healthy; the milk of any animal indisposed should not be mixed with that from perfectly healthy animals. They should be fed with wholesome food, and receive pure water to drink. They should not be heated or worried, and their udders should be washed before milking. The milk should be at once *thoroughly* cooled, and should be kept at a temperature not exceeding 60° in a thoroughly aired place which has *no* connection with any drain or cesspool. The only vessels in which milk should be kept are tin, glass, and porcelain.

4. But to those living in cities it is impossible to be sure that the above instructions are absolutely carried out; hence it is important that all milk used for infants should be sterilized. This can be effected by having the milk carefully brought to the boiling point as soon as it is received, and then cooled rapidly in closely covered vessels. If necessary this may be done twice daily. In a very interesting article (*Amer. Jour. Med. Science*,

May, '88) Dr. Jeffries of Boston gives the result of some careful experiments in the sterilizing of milk and foods for infants. In the commencement he says: "It is a curious fact that while all older people are chiefly fed on sterilized food—that is, cooked food—infants are fed on food peculiarly adapted by its composition and fluid state to open a home to bacteria." His directions for sterilizing are very simple and easily carried out. The flasks and bottles in which the milk is to be kept are to be sterilized by heating them in an oven for thirty minutes at a mild baking heat. This is an advantage, though not an absolute necessity. The milk, as soon as received, is to be placed in these flasks or jars in a steamer containing boiling water. Any cooking steamer with a perforated false bottom and a tightly-fitting cover will do, the only essential being that the heat must be sufficient to keep the water in the steamer in active ebullition. The milk should be steamed when first received, preferably in the flasks, from which it is to be fed to the infants. This requires a few more bottles, as many as the infant is fed times during the day, but will well repay for the trouble. If the milk is allowed to stand before steaming, the advantages of the method are done away with in great part. The milk may be sweet, but has already been acted upon by bacteria, and is certainly unhealthy. In case a sufficient number of flasks cannot be afforded, the milk should be steamed in a few larger ones, kept stoppered with cotton wool, and drawn from as needed. Fifteen minutes steaming is advised, or more. The entire mass of fluid must be heated up to the boiling point, and kept there for ten minutes.

5. In all cases of diarrhœa careful disinfection of the soiled diapers should take place at once. It is certain that the fæces contain the bacteria, and it is possible that the urine does also, considering the frequency with which albuminuria accompanies these diarrhœas.

QUARTERLY RETROSPECT OF OBSTETRICS.

PREPARED BY J. C. CAMERON, M.D.,
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Medicinal Treatment of Abortion.—Dr. A. Cordes of Geneva (*Annales de Gynécologie et d' Obstetrique*) discusses the medicinal as opposed to the operative treatment of abortion, dwelling chiefly upon the action of *Viburnum* and *Quinine*. The one is a utero-sedative, the other a utero-excitant. In threatened abortion, when the ovular attachments are not too much broken up, he finds that rest in the horizontal position, vaginal injections of laudanum retained for some time, and viburnum internally, give the best chance of staving off the attack. Like Dr. Jenks, he finds viburnum specially useful in repeated abortion. In his experience emetics, even in small expectorant doses, act as utero-excitants; cough-mixtures should therefore be given cautiously to women who abort easily. In incomplete abortion, the placenta and membranes being wholly or partially retained in utero after the expulsion of the fœtus, danger may arise from hemorrhage or septic absorption. From hemorrhage, when the adherent bit of placenta is living and maintains its vascular connection with the uterus; from septic absorption, when the retained portion has perished and is undergoing degeneration. Up to the third month the ovum is usually expelled entire; but between the third and sixth months the membranes are so tough and adherent that the afterbirth generally remains in utero. In these latter cases the examining finger often finds the retained portions wholly detached or easily detachable, and can hook out everything *en bloc;* but very often they are so firmly adherent that they can only be detached and removed in fragments, and in such cases quinine is of the greatest use. He agrees with Ramsbotham that a woman runs far greater risk from the retention of small debris partially adherent and decomposing than from a single large fragment. He thinks with Pajot that curetting or brushing out the uterine cavity for the removal of retained matters is apt to do harm, because thereby large fragments are divided up into small shreds, and as it is impossible

to clear them all away, the patient is exposed to greater risk of septic aborption. In his opinion instrumental interference should be reserved for cases of urgent danger, such as hemorrhage or acute septicæmia with fœtid discharges, and quinine should first be tried in all ordinary cases. Since 1876 he has used quinine as a routine treatment and has always found it to excite strong uterine contractions which soon detach and expel adherent debris. He gives thirty grains in divided doses during the first twenty-four hours, and rarely has to repeat it next day. When necessary, he gives fifteen grains in three doses the following day. He finds that plugging is rarely required, and with regard to ergot, he adopts Pajot's maxim that it should never be given as long as there is anything retained in utero. Though for a long time he has been on the look-out for a suitable case to curette or brush, he has not yet found one that would not yield to quinine. In France, Pajot and Tarnier are the great advocates of the expectant treatment, while Doléris and Nitot as warmly recommend instrumental interference. Undoubtedly much harm can be done with the curette, while quinine is comparatively harmless; Dr. Cordes' treatment, therefore, seems to be well worth trying, unless urgent danger calls for immediate interference. When the expectant treatment is employed the patient should be kept under observation till the uterus has emptied itself.

Mitral Stenosis and the Third Stage of Labor.—Dr. Hart reported three cases to the Obstetrical Society of Edinburgh, and after referring to the extreme danger of the complication and the cause of its fatality, formulated rules for its treatment. He strongly discountenances the marriage of women who suffer from mitral stenosis. When this condition complicates pregnancy he advises absolute rest and the continued use of strophanthus. He prefers this drug to digitalis, because it is a pure cardiac stimulant and does not cause contraction of the small arterioles. For the management of the case at the time of labor, his rules are as follows:—

1. Do not give ergot.
2. Do not be afraid of hemorrhage, even if abundant.

3. Be on your guard if the hemorrhage is slight.

4. If the circulation becomes embarrassed (dyspnœa, irregular cardiac action, etc.), push the strophanthus and dry cup over the cardiac region; if that fails, try venesection.

5. Even if the patient seems to be as well as possible, keep her under strict and constant observation the whole of the first day.

According to Dr. Hart, the retro-placental blood-clot and the gush of blood which so often comes in multiparæ when the placenta is separating, are to be regarded as salutary rather than otherwise. He says that thereby a mechanical reduction is effected in the bulk of blood, which, if returned to the systemic circulation, might embarrass the heart's action even in a healthy woman. He thinks that the retro-placental clot has nothing whatever to do with the separation of the placenta.

Fatal Poisoning after Intra-uterine Sublimate Douching.—Steffeck, of Hofmeier's clinic at Giessen (*Centralblatt f. Gyn.*), reports a fatal case of mercurial poisoning after two intra-uterine injections of a weak sublimate solution (1 to 5000). The patient, a multipara, aborted at the fifth month, and a macerated fœtus came away. After the placenta had been retained for twenty-four hours, the patient was etherized and an intra-uterine sublimate douche (one quart of 1 to 5000) administered; the placenta was then separated and removed, a second quart of hot solution injected, and a dose of ergotine given. One hour after the removal of the placenta symptoms of mercurial enteritis appeared, followed by stomatitis, acute nephritis, and death in seven days. The post-mortem appearances were typical of mercurial poisoning. The poison must have entered the circulation directly through the denuded placental site. Since that case, intra-uterine sublimate injections have been given up at Giessen. Douching (intra-uterine and vaginal), curetting, brushing, and all other operative treatments of the recently emptied uterus are attended with more or less risk; such measures should not be employed rashly, heedlessly, or as a matter of routine, but only when the indications are distinct and definite. When an intra-uterine douche is needed, the operator should see that the

solution is dilute, the current weak, and the outflow unimpeded. After the douche, it is a wise precautionary measure to run through a pint or two of very hot water in order to wash away any retained solution and stimulate uterine action. Frictions over the fundus sometimes help in securing a good contraction.

Incompatibility of Antiseptic Agents.—Dr. Boxall (*British Med. Journal*) has sounded a note of warning to which every obstetrician should give heed. He claims that antiseptic solutions often fail because they are variable in strength or are chemically incompatible. If too strong, they may cause local damage or be absorbed; if too weak or rendered inert by chemical action, they are inefficient. The borderland between safety and success is very narrow. The following table shows at a glance the results of his investigations:—

ANTISEPTIC.	INCOMPATIBLES.
1. Corrosive Sublimate Solution	Iodine. Soap, even if neutral or in small quantity.
2. Iodine Solution (with Potass. Iod.)	Corrosive Sublimate. Carbolic Acid. Soap.
3. Carbolic Acid Solution	Iodine. Condy's Fluid. Olive Oil.
4. Salicylic Acid Solution	Condy's Fluid. Soap.
5. Condy's Fluid	Carbolic Acid. Salicylic Acid. Olive Oil. Glycerine. Soap.

It seems, therefore, that soap antagonises the action of all the above antiseptics except carbolic acid; it is highly probable, then, that in obstetric practice, failure to ensure antisepsis has often been due to the hands being soapy when immersed in the disinfectant solution. It seems, too, that carbolic oil must be eliminated from among the disinfectants, as oil combines with phenol and fixes it. This quite tallies with Koch's observations that bacillus spores can live and grow after four months immersion in carbolic oil (1 to 20). In order to secure satisfactory results, it is therefore highly important not only to be sure of

the strength of the antiseptic solution, but also to avoid admixture with other antiseptics and prevent contamination with incompatible soaps and lubricants.

Intraplacental Transmission of Pathogenic Microbes from the Mother to the Fœtus.—Varnier gives an excellent review of the literature of this subject in the last number of *Annales de Gynécologie et d' Obstetrique.* When it was proved that liquids injected into the maternal vessels did not pass through into those of the fœtus, the controversy respecting the connections between the maternal and fœtal circulations was virtually settled. But it soon arose in another form, whether or not very minute elements or organisms held in suspension in the maternal blood are able to traverse the walls of the vessels and penetrate into the blood of the fœtus. The investigations of Brauel of Dorpat in 1857 and Davaine in 1865 seemed to settle this question also in the negative. They found that the embryos of animals which died of charbon showed no signs of the disease, nor did the inoculation of their blood (embryo's) give any results. Of late years their dictum has been challenged and disproved, for it has been shown by various investigators that the placenta does allow certain pathogenic agents to pass through, but prevents others. Chauveau has recently shown (*Annales de l'Institut Pasteur*, 25 Fev. '88) that—

1. The placenta sometimes allows the bacillus of charbon to pass from the mother to the fœtus, but sometimes it completely prevents their passage.

2. Though the placenta does not oppose an insuperable barrier to charbon bacilli, yet it manifestly acts as a filter, because it allows the passage of but a limited number of microbes which seem to be incapable, or only slightly capable, of multiplying in the young subject.

He did not explain, however, why certain micro-organisms, such as chicken cholera, pass from mother to fœtus in a constant manner, while others, such as those of charbon, pass through in certain cases only, nor why the fœtal micro-organisms are inferior in quantity and energy to the maternal.

M. Malooz (Liège) has published an important memoir (*Ann.*

de l'Inst. Past. 25 Mars, '88) proving that when micro-organisms overcome the placental barrier there must exist some histological changes in the chorionic villi, lesions generally due to the pathogenic action of the parasites themselves. He thinks there is not filtration, but something more—a lesion allowing direct communication between maternal and fœtal circulation. These lesions may vary in different cases; the same pathogenic agent may vary in its action upon different placentas, or according to its relative energy may act differently upon the same placenta at different times. Consequently the transmission of microbes from mother to fœtus is not a constant fact, but is as variable and inconstant as the properties of the parasitic elements themselves. Different circumstances must always be taken into account in estimating the possibility of fœtal infection by a certain species of micro-organism—*e.g.*, the degree of virulence, the greater or less degree of attenuation, the more or less distinctive action on cells and tissues, the time which elapsed between the inoculation and the death of the mother, the differences in the texture of the placenta in different animals, and notably the variable thickness (according to species) of the villous epithelium. Reasoning analogously with regard to the transmissibility to the fœtus of other diseases, such as variola, tuberculosis or pyæmia, we can readily understand that the fœtus will be menaced with infection whenever an alteration is produced in the placenta capable of breaking down its cellular barricade—*e.g.*, a hemorrhagic point in variola, a softening nodosity in tuberculosis, an abscess point in pyæmia.

It still remains unexplained why only a few bacilli are allowed to pass, and why they are incapable or only slightly capable of multiplying in the young subject.

Multiple Abscesses in Nursing Children.—M. Roulland (*An. de Gyn. et d' Obstet.*) contributes an interesting and suggestive paper upon this subject. He deals only with subcutaneous multiple abscess, and does not touch upon deep abscess or single superficial abscess. Bouchut attributed this form of abscess to diathesis, and distinguished the scrofulous, syphilitic and puerperal. Roulland entirely disagrees with these views, and holds

that diathesis may act as an adjuvant, but is not the actual cause. The so-called *purulent* diathesis claimed by some he considers unintelligible at the present day, and asks what is there in nursing children to favor the migration of microbes, their more abundant colonisation, or the decreased resistance of the organism against their invasion. He advances the view that this form of abscess is generally traceable to infection arising in the digestive tract, whence noxious alkaloids are carried off in the circulatory stream, and are partially eliminated by the skin. The proper treatment would therefore seem to be attention to the digestive functions.

Version and Extraction in Transverse Presentations—their relation in point of time.—It has long been a matter of dispute whether in transverse presentations it is better to perform version early and then wait till the os is fully dilated before extracting, or whether the os should be allowed to dilate fully so that extraction may immediately follow turning. In the Berlin clinic between 1876 and 1884 there were 310 simple uncomplicated cases of transverse presentations at full term. Winter, from an analysis of that material, came to the conclusion (1) that version should not be performed till the os is sufficiently dilated to permit of extraction, and (2) that the best results for the child are secured when version is followed immediately by extraction. Dohrn of Königsberg agrees with the first of Winter's propositions, but not with the second. His conclusions are: 1. Version should be performed only when the os is fully dilated, except in cases of emergency. 2. Extraction should be performed only for definite indications; the interests of mother and child are best secured by the spontaneous expulsion of the fœtus. Dohrn says that when extraction immediately follows version the position and rotation of the fœtus are apt to be different from what they would naturally be in spontaneous delivery, and that the natural coaptation of the fœtus to the parturient canal is less dangerous than the artificial. He thinks that in transverse presentations, with partial escape of the liquor amnii, the danger to the fœtus has been much over-estimated, provided the patient is kept in the recumbent position and is in competent hands. He reports

152 cases of version followed immediately by extraction, with a fœtal mortality of 22; 29 cases of version without extraction without a death, the natural efforts accomplishing delivery in fifteen to seventy-five minutes.

The Credé Method of Treating the Placenta.—At the late Wiesbaden meeting of the German Naturalists and Physicians a number of excellent papers were read before the gynæcological section. Among other things, Credé's method came up for discussion, and Freund, Dohrn and Ahlfeld criticised it somewhat severely. In the last number of the *Archiv für Gynäkologie*, Credé defends his method against the attacks of his critics and makes short work of their objections. He maintains that the fundamental principle of his method is theoretically correct, has stood the test of experience, and has never been assailed; that the objections urged against it have been directed against secondary and unimportant details, and that some of the improvements suggested are not at all new, being already contained in his method, and those which are new are not worth anything. He concludes by saying that his method remains unchanged in its fundamental idea as well as in its subsidiary parts, and has suffered no loss of any consequence through the repeated attacks made upon it, and that there is no occasion to accept any one of the changes that has been proposed up to the present time.

Cæsarian Section and Craniotomy.—Until recently the American statistics of Cæsarian section have been very unfavorable as compared with those of Germany; but the successful cases of Lusk and Garrigues in New York, Jaggard in Chicago and Howard Kelly in Philadelphia have shown what is possible here in good hands and under favorable conditions. Although the improved operation, in its proper place, is a valuable addition to the resources of conservative midwifery, it has its limitations, and there is danger of its being pushed beyond its proper sphere. Its brilliant results in Germany seem to have fairly dazzled the profession and borne down all opposition, so much so that some of its enthusiastic admirers do not hesitate to say that craniotomy upon the living child is now unjustifiable. If such teaching finds

its way into our medical schools, it is bound to do a great deal of harm. If young men, as yet inexperienced in surgical manipulations, are taught that craniotomy is unjustifiable and that Cæsarian section is to be performed even in moderate pelvic contraction, much maternal life will be needlessly sacrificed and a wave of reaction will soon set in against the operation. It is one thing to recommend section as preferable to craniotomy when the operation is to be performed by a skilful abdominal surgeon with skilled assistance and under favorable conditions; but it is quite another thing when it is to be done by a general practitioner without special experience, and without that ample and intelligent assistance which a well-equipped hospital can alone supply. If the results in America are to be made as favorable as those in Germany, the operations must be done in hospitals by skilled men, and not in private by general practitioners. Already there are signs of a revulsion of feeling, and calm, thoughtful men are raising their voices in protest against the abuse of an operation which in its proper place is one of the grandest triumphs of modern surgery. Prof. Jaggard of Chicago is not one of the blind enthusiasts; his temperate and timely remarks (*Medical News*) are worthy of careful consideration. In reporting his own successful case of Cæsarian section he draws attention to the following points:—

1. The necessary maternal mortality of craniotomy performed under conditions demanded by Cæsarian section, with the best instruments and adequate skill, in contracted pelves with a conjugate of 6 to 8 cm., is zero. The maternal mortality of Cæsarian section is considerable. Shock incident to the operation, entirely apart from sepsis and loss of blood, is an element of danger which can never be wholly eliminated, and it is more difficult to get the necessary skill and conditions for Cæsarian section.

2. The consent of the patient obtained without direct or indirect coercion is an essential condition to the relative indication.

3. The life of an adult woman who has already contracted relations with society is of incomparably greater value, as judged by human standards, than the problematical existence of an unborn babe. Moreover, the expectancy of life in such children

is less than in those of normal birth. If the operation is done before the objective changes of labor are noticeable, there is risk of the premature interruption of pregnancy, a matter of obviously serious moment for the child. The mother is seldom able, even if permitted, to nurse the child. The offspring of rickety or osteomalacic women are often feeble, sickly and unable to resist the unfavorable influences of the environment, entirely apart from the effect of hereditary disease.

In France, Pinard takes strong ground against Cæsarian section in moderately contracted pelves. He reports 49 cases of Basiotripsy performed by seven different French operators for pelvic contraction of 5 to 8 cm. without a single maternal death. He refuses to admit a relative indication for Cæsarian section until its mortality has been reduced to nearly that of Basiotripsy; he would perform section for an absolute indication only (a conj. ver. below 4 to 5 cm.), when Basiotripsy is no longer possible.

Wyder of Berlin, in a paper read at Wiesbaden (*Archiv f. Gyn.*, Bd. xxxii, Hft. 1), protests against forcing Cæsarian section to entirely displace craniotomy upon living children. After comparing the relative advantages of craniotomy, C. section, and the induction of premature labor in contracted pelves, he says that a conscientious physician, in the case of a primipara with a moderately contracted pelvis, at a time when there is danger to neither mother nor child, could scarcely recommend an operation which has still a mortality of 17.5 per cent.; and if the patient is a multipara, she would hardly consent to a C. section if she had gone through labor successfully before. He brings the question home by asking whether a man would, under similar circumstances, recommend the section operation in the case of his own wife, sister or near relative. He does not think that it will ever entirely displace craniotomy upon living children. He is strongly of opinion that when the operation is performed, it should be done in well-organized institutions, by skilful hands, and under the best possible conditions. He concludes that—

1. In pelvic contraction of the *fourth* degree (5.5 cm. and under), if seen early, abortion should be induced; towards the close of pregnancy C. section is the only resource.

2. In pelvic contraction of the *third* degree (5.5 to 7 cm.), in the early months the induction of premature labor should be considered; failing this, the patient should be given the choice of C. section or craniotomy. As long as the mortality of C. section remains more than double that of craniotomy it is not right to recommend it as the proper operation in such cases, but the patient and her friends should be permitted a free choice.

3. In pelvic contraction of the *second* degree (7 to 8.5 cm.), or the *first* degree (8.5 to 10 cm.), C. section should not be recommended to primiparæ except in cases of urgent necessity, because it is very hard to tell whether labor will be difficult or not; nor to multiparæ unless previous labors have done badly and the patient and her friends earnestly desire a living child.

In the discussion which followed, Ahlfeld of Marburg supported Wyder, while Sänger and Korn took the opposite side. They all agreed as to the advisability of doing C. section operations in well-appointed hospitals.

Correspondence.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,— Sutton (*Lancet*, Feb. 1888) mentions the case of a Mussulman, aged 28, at Quettah, who was seized with vomiting, diarrhœa, cramps, collapse, and symptoms of cholera, but without suppression of urine. After four days of incessant vomiting a worm, an *ascaris lumbricoides*, was brought up. This case being quoted by the *Medical Recorder* brings to recollection two cases of a similar kind, where an *ascaris* was vomited on ship board. In one case, that of an emigrant boy, vomiting had persisted from the start, and relief was not experienced for seven days; in the other case, the patient was a young lady who was suffering very severely from supposed sea-sickness. Improvement followed the vomiting of the worm. Does this not suggest castor oil and santonin as a prophylactic measure?

Your obedient servant,

BOTHRIOCEPHALUS LATUS.

Reviews and Notices of Books.

A Manual of the Physical Diagnosis of Thoracic Disease. By E. Darwin Hudson, Jr., A.M., M.D. New York: Wm. Wood & Co.

In 1885 the late author of this work printed and published privately for the use of pupils and friends a small book entitled "Essentials of the Physical Diagnosis of Thoracic Disease." This little work was found both convenient and useful; the author therefore felt encouraged to put forth the present volume, which is an elaboration of the material of the "Essentials." A melancholy interest attaches itself to the manual, from the fact that the author died suddenly and at a comparatively early age just after his manuscript had been completed and before it had been placed in the hands of the printer.

The whole subject of physical diagnosis of the chest is dealt with in a very concise, even abrupt style, so that occasionally one is disposed to think that the material formerly served as lecture notes. The oft-told tale of percussion and auscultation is here told and well told again, spiced here and there with an original and practical observation. The directions for percussion are very good. The observation that the evidences of a latent pneumonia are sometimes to be found in the upper axillary region is one we have lately had opportunities of verifying at the bedside. Dr. Hudson believed, along with his friend Dr. Leeming, in the frequency of intra-pleural râles. "Given a limited or diffused area of sub-crepitus or crepitus beneath the ear, how are we to decide whether the cause is plastic pleuritis or localized pulmonary hyperæmia, or inflammation with exudation of serum, sero-lymph or lymph into capillary bronchi?" The râle is of pleuritic origin, he answers. "When the crepitus is localized, is over an area of tuberculosis or other infiltration, and is persistent for some time without pronounced bronchial breathing or voice, flatness on percussion, and when associated with constant dry cough—*i.e.*, no expectoration—the râle must be regarded as of pleuritic origin."

Directions then follow as to the mode of distinguishing the

causes of the pleural râle. Unfortunately our limited space will not allow us further discussion. We cannot approve of the synopsis of lung or heart diseases, savouring too much of the grinding class. The student would in this line of study do better with the full description of the standard text-book. The plates, to the number of nearly one hundred, admirably illustrate the text. Some are new to us, others are very old friends.

On Fevers: their History, Etiology, Diagnosis, Prognosis and Treatment. By ALEXANDER COLLIE, London: H. K. Lewis.

The observations contained in this volume, so the preface tells us, are for the most part based upon the study of over 21,000 cases of fever, which the writer has personally treated from commencement to termination. Consequently we look forward to a record of personal experience and original observation. In this we are disappointed, though we find instead a very well written handbook, representing what is known of the subject up to the present date. We must, firstly, express approval of the colored plates accompanying the volume, and more especially those representing various appearances of smallpox; they are well executed and true to nature.

The introductory chapter on the pathology of fever represents in a few pages the state of present opinion on this important subject. Germs have not won over our author completely, though he believes that "the germ theory, like the atomo-mechanical in physics, and the atomic in chemistry, may be a good working hypothesis, but it cannot yet be regarded as a complete explanation of the acute infectious diseases." And it will be seen that it has been the writer's life-work to study the practical aspect of fevers rather than to theorize upon their cause, for in the chapter on pathology he prefers to bring together extracts from various authorities on these matters, rather than to furnish the reader with his own explanations.

As with all who have had experience in the treatment of the fevers, the author strongly believes in the efficacy of alcohol in severe cases, and especially in those cases where there is an

inability to take ordinary food. We do not agree with him that alcohol "is particularly useful in convalescence when the patient feels his weakness, and, above all, in convalescence from enteric fever when the craving for food is strong and cannot be gratified." In this country at least we are disposed to think that the use of alcohol during convalescence is, for those not accustomed to its use, a dangerous experiment. The alcohol habit has often thus taken its origin.

In scarlatina it seems that the prognosis must be worse in England than in this country. We rarely meet with fatal cases, and as far as our knowledge goes the malignant form described by English writers is rarely, if ever, met with. Nor is it our experience that diphtheria in scarlet fever is usually fatal.

To the chapter on typhoid fever we turn with eager interest. With this disease Canadian practitioners are unhappily familiar. Dr. Collie's cases resemble very much our own, and the same doubts and difficulties beset the practitioner in either country.

When speaking of the diagnosis of the tubercular diseases, peritonitis, ulceration of the intestine, etc., from typhoid fever, Dr. Collie states that he has never met with enteric fever in a phthisical subject. This is an interesting statement. The coincidence seems to us not of very rare occurrence, though at the moment but one case presents itself to the memory. As to the resemblance between tubercular peritonitis and typhoid, the author "knows of no means by which a diagnosis may be made with certainty, although there is no doubt much room for the exercise of the gift of prophecy."

In the important matter of diet, caution is recommended in allowing solid food; "in a well marked case solid food should not be allowed until the patient has been free of fever for from ten to fourteen days." This seems somewhat outside the limit. Surely some change may be allowed before the fortnight of normal temperature has elapsed. Certainly in this country fish is not a desirable article with which to begin solids. We have generally found that our fish do not agree with fever patients as well as could be wished.

The bathing system, as so strongly advocated by modern

German writers, is not favorably regarded, and the statistics on which the statements in its favor are based are compared unfavorably with those of hospitals where the bathing system is not practised. "It is important to observe that it is in the small country towns of the continent that the 'antipyretic treatment' has been said to be successful, such as Halle, Jena, Heidelberg, Prague, Zurich, etc. It does not succeed in Vienna, London or Glasgow. In overcrowded cities the cases are more severe."

Hemorrhage of the bowels is treated mainly by opium, a procedure based on sound principles and eminently satisfactory in its actual application. The administration of the ordinary so-called astringents has always appeared to us a worse practice than therapeutical nihilism. To secure rest of the bleeding part by the administration of opium is the only requirement of the situation which we are in a position to fulfil. The action of the astringents can always be explained on *post hoc* principles.

The chapters on smallpox, typhus, and relapsing fevers are full of instructive observation, and entirely in keeping with the generally high standard of the whole work.

In conclusion, to our readers we recommend Collie on Fevers as a very well written summary of the subject, treated in a style such as renders it both interesting and instructive.

Ophthalmic Surgery. By ROBT. B. CARTER, F.R.C.S., Ophthalmic Surgeon to St. George's Hospital and to the National Hospital for the paralyzed and epileptic; and WM. A. FROST, E.R.C.S., Assistant Ophthalmic Surgeon to St. George's Hospital, Assistant Surgeon to the Royal Westminster Ophthalmic Hospital. Illustrated with a chromograph and ninety-one engravings; 554 pages. Philadelphia: Lea Brothers & Co., publishers.

This is a handy volume, arranged in fifteen chapters, with an appendix containing specimens of the usual test types and test letters, together with a number of formulæ such as the authors have found most serviceable in ophthalmic therapeutics. The arrangement of the work is both practical and convenient; com-

mencing with a chapter on the anatomy and physiology of the eye, everything of practical value in this connection has been condensed into the smallest possible space. Throughout the whole work the same characteristic is conspicuous, viz., great condensation without omission of anything of essential and practical importance; at the same time it is fully up to the times in all the recognized progress of recent years in the science and art of ophthalmology. The style is easy and agreeable to a degree seldom attained by the writers of medical literature who aspire to the difficult combination of brevity and completeness. The book is, in fact, a thoroughly readable one, and we can cordially recommend it to every student of ophthalmology.

Outlines of Practical Physiology: Being a Manual for the Physiological Laboratory, including Chemical and Experimental Physiology with reference to Practical Medicine. By Wm. Stirling, M.D., Sc.D., Professor of Physiology and Histology in the Owens College, Manchester. With 142 illustrations. London: Charles Griffin & Co.; Philadelphia: P. Blakiston, Son & Co.

Of handbooks for practical work in physiology proper there are few in the English language, hence we are inclined to accept, without too careful a search for faults, books of this character that are moderately good, as there is a place for them, and Dr. Stirling's work is at least that. It is very comprehensive and concise, perhaps too much so for the ordinary student; it abounds in figures of apparatus, and supplies some cuts of the dissections required. These, from an artistic point of view, are rather poor, but answer the purpose sufficiently well. We should have been pleased, as theory has been introduced, to have observed a little more discrimination in the interpretation of certain experiments in departments which have lately been pretty well worked, and in which we were somewhat disappointed as to Prof. Stirling's presentation.

We have always been opposed to the burthening of the ordinary text-books of physiology with a great mass of technical details, even when well illustrated by plates. The handbook for

the laboratory or the cyclopædia is the place for such. Here they are not only fitting, but absolutely necessary. It is one thing to introduce enough technique to enable the student to understand in a general way how results are obtained, and a wholly different thing to furnish that knowledge of methods essential for the actual performance of experiments by instruments of precision. We think Dr. Stirling's book supplies a want, and we wish it well.

A Compend of Human Physiology. By ALBERT P. BRUBAKER, A.M., M.D. Fourth edition, revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1888.

This little work forms one of the series of so-called quiz-compends; but if any one purchases it supposing that it contains physiology in the form of question and answer he will be mistaken. It is purely a compend, and as such a very good one. Doubtless such works *may* serve some good purpose; but that, upon the whole, they are responsible for much injury to the mind of the student we are fully convinced. They are like a powerful medicine—very useful under wise direction, but not to be put into the hands of the inexperienced. The medical student has so much to do within the time allotted to this course of study that he is under constant temptation to take short cuts to the goal—the examination goal being, unfortunately, the only one generally before his eyes. To put such books as the above within easy reach involves, in our opinion, much responsibility. The author has discharged the task he undertook well, but we regret that such was ever assigned to him or anyone else. Students should make their own synopses; then, and then only, are they legitimately entitled to the generalizations of the subject.

Fever-Nursing. By J. C. WILSON, A.M., M.D. Philadelphia: J. B. Lippincott Company. 1888.

The author has put into book form a course of lectures given before the nurse-class at the Philadelphia Hospital, the object having been not only how fever patients are to be cared for, but also why they must be cared for in particular ways. Success

in this endeavor is likely to be achieved by the careful study of this work. Fever-Nursing will be found, we hope, in the hands of many hospital nurses as well as in many households. The work is divided into two parts—the one, Fever-nursing in General, to which the first three chapters are devoted; the other consisting of a concise clinical history of each of the fevers separately. The descriptions in the latter are not only well adapted for nurse-readers, but are in themselves well written, and bring to mind a vivid picture of those groups of symptoms with which experience has made us familiar. Several other handbooks on nursing are published in the same series; if all are up to the standard of Dr. Wilson's work, then they deserve the recommendation of clinical teachers as sound text-books for the use of the nursing staff.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, March 2nd, 1888.

JAS. PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

Muscular Atrophy.—DR. STEWART exhibited two cases of muscular wasting.

Extirpation of the Uterus.—DR. WM. GARDNER exhibited two uteri removed by the vaginal method. In the first case, the patient, aged over 50, was sent to him by Dr. A. A. Browne of this city. There was a history of menopause for several years, then hemorrhage and other discharges for eight or ten months, and severe pelvic pain for three or four months. Decided failure of strength and general health. On examination, a friable, ulcerated, easily bleeding condition of the cervix. No enlargement of the uterus or palpable involvement of vagina and broad ligaments. The diagnosis was cancer, and extirpation of the uterus advised. The patient consented, and the operation was done on the 18th of February. On opening the uterus the diseased action was found to have extended some distance within the cavity of the body, thus accounting for the severe pain.

The patient made an easy recovery, and left Dr. Gardner's private hospital feeling better than for months previously.

The second specimen was from a patient of Dr. C. O. Browne of Knowlton. She was aged 29, married twelve years; five pregnancies, all to full term, the last labor two years and four months previously. She had suffered from uterine symptoms and intense nervousness for six years. All the symptoms had been much worse for twelve months, during which time pelvic pain, hemorrhage and dirty-colored vaginal discharges were constant and pronounced. On examination, the uterus was retroverted and prolapsed, the cervix lacerated, of stony hardness, and the posterior lip occupied by an ulcer which Dr. Browne asserts to have existed for four months. The diagnosis was probable malignant disease, and extirpation recommended. Three weeks later she entered Dr. Gardner's private hospital and the operation was done on 1st March. The method adopted in this case was that practised by Martin of Berlin, the posterior cul-de-sac being opened as the first step. The patient made a tedious recovery. The pulse ranged for several days from 150 to 180, being, in fact, at times scarcely to be counted. Other symptoms were without any alarming feature. The pulse before operation was between 120 and 130. The specimen was pronounced by Dr. Johnston to be not malignant, but in view of the clinical character of the case, and the fact that the microscope was not always a certain means of diagnosis of cancer, Dr. Gardner felt justified in extirpating the uterus and ovaries in this case. The operation had been done in Germany several times for conditions well known not to be malignant, but not amenable to other methods of treatment. When the mortality has been reduced, as in Leopold's hands, to six per cent., as a result of improved technique and otherwise, then he (Dr. Gardner) considered it perfectly justifiable for certain cases other than malignant, and in future he intended to advise it for a limited number of such. This was the fifth case in which he had extirpated the uterus without a death and without alarming symptoms.

Dr. Roddick asked if Dr. Gardner would recommend extirpation of the uterus for chronic endometritis.

DR. GARDNER replied that the question was an important one that often presented itself to the gynæcologist. The operation is now done with comparative safety, and in selected cases would certainly operate in this way.

DR. J. C. CAMERON referred to the necessity of microscopic examination of the tissues removed by scraping before a diagnosis of malignant disease is made. The microscope is not used as much in America as it should be in such cases. The German gynœcologists are setting us an example in this respect.

Sutured Patella.—DR. BELL showed a patella which had been sutured five months previously. The patient, a young Norwegian sailor, fell from the rigging of his ship and fractured his patella nine weeks prior to the arrival of his ship in port. He had had no treatment of any kind. He was admitted to hospital on the arrival of his ship in port, when the patella was found to be fractured transversely through its centre. There was no sign of any union, and on flexing the leg the parts separated widely, so that the articular surface of the end of the femur could be distinctly felt through the skin. The patella was treated by paring off the rounded cartilaginous faces of the fracture and suturing with three strong sterilized silk sutures. The first dressing was not removed for six weeks, when the wounds were all perfectly and soundly healed and the patella apparently firmly united. A splint was applied for three weeks longer and then removed, and the patient allowed up and advised to practice passive movement of the joint. After three weeks of this passive motion the union of the patellar fragments seemed to be not so firm, and the patient was put to bed and a plaster-of-Paris splint applied. In six weeks more this was removed, and the house surgeon applied a light posterior splint of Gooch's ribbed splinting, and with this he walked about in perfect health and comfort until the 22nd of January, four months after operation, when he complained of a little fever and some pain in the leg and knee. On examination, the knee was found tender and slightly swollen, and a sore which had been produced on the skin by the corner of the splint and dressed with a little dry gauze was found to contain fully an ounce of pent up pus, which

was removed and the wound treated. He also had a suppurating ingrown great toe nail on the foot of the same side. Pyæmia developed, and the patient died in four weeks, just five months and a half after operation. The pyæmia was undoubtedly due either to the sore on the skin or the ingrown toe-nail, and could not have been in any way directly due to the operation, as the knee had been perfectly healed and free from pain or other symptom for over three months before the pyæmic symptoms appeared. At the autopsy, ulcerative endocarditis was found, as well as several purulent foci in internal organs. The patella was found to be perfectly united, the union being quite firm and evidently bony. The silk sutures were found just as they had been left at the operation, the silk being apparently unchanged.

Discussion.—DR. ARMSTRONG said he thought the specimen showed bony union, and asked Dr. Bell why he thought the union was not good when the dressing was taken off.

DR. BELL replied that there was movement at that time between the parts, though subsequently complete union occurred.

DR. RODDICK congratulated Dr. Bell on the excellent result of his operation, and was inclined to accept his explanation of the cause of the pyemia, as, if the knee had been the starting point, there would not have been such union, and the joint would have been seriously affected. He referred to a case of a young girl recently confined who came to hospital with a painful knee. The bursa patellæ was found enlarged, and on the inner side of the leg, two inches above the inner malleolus, was a small ulcer the size of a shilling, unhealthy and sloughing; proceeding up from this was swelling and suppurative cellulitis to the bursa patella, which also was in a state of suppuration. The bursa was opened, cleaned and drained, and the cellulitis and ulcer treated, with the result that the girl was well in two weeks.

DR. SHEPHERD saw the case with Dr. Bell in hospital. He found undoubted mobility after the dressing was removed, and did not think now that the union was a complete bony one, but the parts were no longer movable. He thought there was a line of fibrous union between the fragments. The pyæmia was not due to the operation, but to the sores on the leg and foot.

Stated Meeting, March 25th, 1888.

JAS. PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

Subdiaphragmatic Abscess.—DR. SHEPHERD exhibited the patient whose case he had related at a previous meeting of the Society, and who had suffered from subdiaphragmatic abscess. When the case was reported to the Society a sinus remained below the costal cartilages on the right side. This had now completely closed, and the patient felt as well as ever he did. Liver dulness was normal, and breath sounds in right lung clear in every part.

The Bacillus Scarlatinæ.—DR. MCCONNELL read the following paper on this subject:—

The nature of the contagium of scarlatina is a question which has during the past year occupied a prominent place in English medical societies and periodicals. In December, 1885, an outbreak of scarlatina occurred in London, and it was supposed that the infection was conveyed by milk from a dairy in Hendon. The subject was investigated by Dr. Klein. Several of the cows were found to be suffering from an infectious disease characterized by vesicles and ulcers on the udders. From this Dr. Klein isolated a streptococcus. He also discovered a similar organism in the blood of scarlatina patients after the fourth day. Inoculation experiments were performed, and Dr. Klein concluded that the Hendon cow disease was identical with scarlatina. In a critical review of this subject by Dr. Geo. Thin at the Dublin meeting of the British Medical Association, doubts were cast upon these conclusions; and later, Prof. Crookshank was deputed by the Agricultural Department of the Home Office to make further investigations. Abstracts of the voluminous reports of the investigation were in December last and January of this year placed before the Pathological Society of London. The conclusions arrived at were that the *streptococcus scarlatinæ* of Dr. Klein was identical with *streptococcus pyogenes*, a micro-organism found in acute abscess, etc., and frequently found associated with a number of other affections, and that the Hendon disease was cowpox.

Researches regarding the nature of the contagium of scarlatina were made in the early part of 1887 at the bacteriological laboratory of Edinburgh University by Dr. Alex. Edington. Eight different organisms were isolated. A streptococcus, provisionally specified as *rubiginosus*, was found in 20 per cent. of the original tubes inoculated with scales from scarlatina patients during the stage of desquamation, or from the blood, and is apparently identical with Dr. Klein's streptococcus scarlatinæ. A bacillus was found to be present in the scales in every instance when examined after the third week, and in every case the same bacillus was found in the blood during the first three days of the fever. Rabbits and calves were successfully inoculated, producing a disturbance and appearance resembling scarlatina in man. The conclusions formed were that this bacillus (called *B. scarlatinæ*) was the specific cause of scarlatina, and that the other organisms were "merely concomitants and pass into the blood only after the vitality of the system and tissues has been lowered by the entrance of this specific organism."

In September last I inoculated test tubes of potash peptone gelatine from several cases of scarlatina, using sterilized capillary tubes, to which about an inch of the original glass tubing remained, this part being plugged with cotton wool; the finger from which the blood was taken being previously covered with lint saturated with a 20 per cent. solution of carbolic acid. In the first case the blood was examined about the beginning of the fourth day of the disease. The tubes, on being incubated, were all found to be sterile. The blood of another child in this family was examined on the second day of the disease, when almost a pure culture of Edington's bacillus was obtained.

On Oct. 13th, 1887, similar cultivations were made from a child, five years of age, suffering from scarlatina, on second day of fever; and also from her sister a few days later. The same bacillus was procured. The lower limb of the first child was in accordance with Edington's method of securing the desquamation, wrapped in sterilized cotton wool, after being cleansed and disinfected. The scales procured on the twenty-second day gave

an abundant culture of the same bacillus, associated with micrococci. The character of this organism, as you can ascertain from an examination of these stained specimens and cultures, are distinctive. Dr. Edington's description appeared in the *British Medical Journal* of August 6th, '87. The bacillus, which is motile, is from 2 m. to 5 m. in length and 4 m. to 5 m. in breadth; it is markedly aerobic, grown on jelly in the incubator at from 18°C. to 23°C., it will form a pellicle at the surface in from 24 to 36 hours. The time in which the pellicle will form and the rapidity with which it will liquify the gelatine is less where the material used is the last of a number of successive inoculations from tube to tube which increases its activity. The pellicle forms more readily on bouillon, is semi-transparent, looking like parchment, very firm, and formed by the interlacing of the bacilli into a felt-like membrane, it now becomes wrinkled and the margin may be pushed up the side of the tube ovoid; spores then form, and in three or four weeks the pellicle will disappear. It grows rapidly on milk and on potato, forming a citron-white pellicle, which becomes darker in color; grows less readily on agar-agar, and poorly on blood-serum. On plates the growth is characteristic. The colonies grow for a day or two before the gelatine begins to liquify; this occurring first in the centre, and proceeding outwards, the bacilli then become motile, and later assume the form of Leptothrix filaments. The colony then has the appearance of three zones—Leptothrix in the centre, actively multiplying bacilli at the margin, and motile bacilli at the edge of the liquified portion.

The point of chief interest is the fact that the bacillus is found in the blood only up to the third day of the fever, and not in the desquamation until the twenty-second day. The rapid growth of the bacilli is in harmony with the short period of incubation of scarlatina, and the finding of the bacilli in the scales is in accord with their well known infectiousness; and the prolonged duration of their infective powers is explained by the tendency to spore formation, even in the blood, which characterizes the bacilli. The practical utility of this addition to our knowledge concerning scarlatina was demonstrated by Dr. Jamieson,

—at whose suggestion the experiments were carried out,—even before the discovery of the real nature of the contagium, from the fact that by applying antiseptic remedies to the throat in the earliest stage, bathing the surface, and applying carbolized ointments as soon as desquamation began, he was enabled, without any special isolation of the patients, to prevent the spread of the disease to any other member of the family in which it occurred, even in instances where a number of young children were allowed to associate as usual with the affected member. During the last three years this happy result had invariably been attained. Although not yet fully trusting to these baths and anointing alone—that is, without isolation—one case where this was impossible illustrates the utility of these measures. In this family there were three children; the oldest had scarlatina on Dec. 15th last; the anointing was fully carried out, and although the children mingled together constantly, the others escaped the disease.

Further investigations will be required before this organism can be fully established as being the true specific cause of scarlatina, as evidenced by the first report of the committee of the Edinburgh Medico-Chirurgical Society appointed to investigate the subject, in which they stated their inability to infect calves by either blood or scales of scarlatina patients. Their susceptibility to scarlatina is a point claimed by both Drs. Klein and Edington in their experiments, but that we have in the antiseptic treatment of the skin and throat a means of preventing the spread of the disease seems well established, and should the claims of Dr. Illingworth for biniodide of mercury as an abortive in this disease be sustained, great advance has been made in the management of this prevalent affection, and the night of empiricism which has hitherto prevailed in regard to the treatment of this class of disease we may anticipate will soon give place to the light of scientific methods.

A Case of Lightning Shock.—Dr. Mills read a paper on this subject, and Dr. Buller gave the intra-ocular changes produced. (This paper will appear in full in the next issue of this Journal.)

Stated Meeting, April 6th, 1888.

JAMES PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

Alopecia Areata.—DR. ARMSTRONG exhibited the case and gave the following history: The patient is a young woman of 25; married last November. About a month after marriage noticed a large bald patch a little behind and to the right of the situation of the post-fontanelle. From that time to the present new patches have continued to appear at short intervals on different parts of the head until now there are twelve or fourteen patches, varying in size from a 20 cent piece to that of a half dollar, and situated back and front and at both sides. It is for this reason principally that I show the case. There is still a difference of opinion as to the etiology of this form of alopecia. Thus Duhring and Stelwagon, in Pepper's System of Medicine, Vol. IV, state that the disease is "not parasitic, nor is it contagious." Balmanno Squire, in the third volume of Reynolds' System of Medicine, defines the disease as contagious, and produced by a vegetable parasite, the *microsporon andonini*, and he inserts an illustration of the spores of the fungus. The appearance of these patches, situated on all sides of the scalp, suggests very strongly to me the idea that the disease is parasitic. If due to nerve disturbance, one must admit that some cause is acting which involves the terminal twigs of many different nerves and of several branches of the same nerve. I am not familiar with any variety of nerve disturbance at all analogous to the condition which obtains in this case of alopecia. The large patch, with several smaller ones appearing secondarily and subsequently, suggests the idea of contagion, the same as occurs in ringworm of the scalp. I know of an instance where father and son suffer from alopecia areata, the one having it some time before the other.

Discussion.—DR. BELL said the ordinary clinical history of the disease was against the theory of a parasitic origin. The pathology is very doubtful. He never made a practice of separating patients from the rest of the family, and in most cases there is recovery in a few months, but the hair is apt to come in

differently pigmented, if not white. Treatment was usually expectant, used a shampoo to keep the skin healthy, and gave tonics.

DR. TRENHOLME had seen coal oil, well rubbed in, restore the color of hair when the color was spoiled.

Fibroid of the Uterus.—DR. LAPTHORN SMITH exhibited a patient to illustrate the effects of electrical treatment, and read the following history:—

The patient came to me on the 19th March, very wretched in appearance, and leaning heavily on the arm of a friend, without whose assistance she was hardly able to walk. She measured 32 inches around the waist, although her normal waist measurement she said was 21 inches three years ago. I was unable to pass the sound any further than 3½ centimeters, but with it at this distance I gave her 50 milliampères with the negative pole during seven minutes. She came again on the 20th March, telling me that she had had less pain since and could walk better, and that her friends told her she was looking better. I gave her 150 negative for five minutes, which she bore well. On the 23rd she was menstruating, so I did not give her any electricity, but her belly was not at all tender to pressure, and the menstrual flow was more profuse than usual. On the 27th she came again, having ceased menstruating; instead of lasting fifteen days, as it did before treatment, it only lasted five days, but she lost more in the five days this time than she did in fifteen before—not more, however, than a woman should lose at a period. She measured 4 inches less around the waist. I gave her 150 positive for five minutes, the sound entering five centimetres. On the 29th March she measures only 27 inches around the waist, and she feels so much better that she thinks she will soon be able to return to work. I gave her 140 positive for five minutes.

March 31st.—She says she has a hollow at the pit of her stomach now instead of a lump. I gave her 125 negative during five minutes, which she bore well, the sound entering five centimeters.

April 3rd.—Waist measurement steadily decreasing, and she is hardly at all sensitive over the abdomen. Gave her 100 nega-

tive for five minutes. *5th*—Gave her 100 negative during six minutes, which she bore easily.

This is as far as I have got with the case, and of course I am only in the middle of the treatment; but the result has been so striking, and her previous condition having been so well authenticated, and she seemed so willing to come here to show herself, where it is not alway easy to bring them, I thought it would be interesting to the members to see one of the many cases of the kind I have at present under treatment.

Perforating Ulcer of the Stomach.—DR. ARMSTRONG also showed a specimen of round ulcer of the stomach, remarkable for its large size as well as the obscure previous history. The patient was a well-nourished, but anæmic, unmarried woman, aged 28, a nurse in the Western Hospital. For a year past she had complained of being out of sorts, at one time having well-marked left intercostal neuralgia affecting the seventh and eighth nerves of that side. She had also complained of burning pain at lower end of back, which was found to be due to a retroverted uterus, and which was relieved by the use of a suitable pessary. Her appetite had been poor, but she always denied suffering pain after eating, and had never vomited her food except once. For about a month or six weeks before the symptoms of perforation developed, she had nearly every day complained of severe abdominal pain, referred principally to the region of the umbilicus, and sometimes of pain in left iliac fossa. This was unaccompanied by corresponding pain on pressure. Her bowels moved every day, and the stools were of good color and formed, but not hard or dry. On Friday afternoon she suddenly took a severe chill, with severe pain referred at first to left iliac fossa. In a few hours symptoms of general peritonitis developed with vomiting of everything taken into the stomach. Death ensued forty-eight hours after the symptoms of perforation. At the autopsy there were the usual evidences of general suppurative peritonitis. The left fallopian tube was dilated to one inch in diameter, and contained pus. So far as could be made out, no rupture of tube had taken place. On the posterior wall of the lesser curvature of the stomach a large round perforation was

found, having a diameter of 1¼ inches. The edges were rounded and smooth. This is certainly a very unusually large opening.

DR. PERRIGO said that the patient was under his care in the Western Hospital for some time; she then had paroxysmal intercostal neuralgia, coming on every afternoon. Small repeated doses of quinine had no effect, but large doses gave relief. There was no history of vomiting or indigestion.

DR. BELL referred to a case recently shown by Dr. George Ross. The stomach of a girl aged 19 had several ulcers; two were completely healed and some partially, one had perforated and caused death. During life there were no symptoms referable to gastric trouble. No history of vomiting or indigestion.

Renal Tuberculosis.—DR. LAFLEUR exhibited the kidneys and bladder from a cases of renal tuberculosis. The right kidney was much enlarged, nodular, and could be distinctly mapped out externally. Its capsule was thickened and adherent to the liver, ascending colon and duodenum. On section, was found to consist of a collection of small cavities filled with creamy pus and caseous detritus, all communicating with pelvis of kidney. Ureter was dilated and infiltrated with tubercular nodules. In left kidney there was a small caseating nodule at the apex of one of the pyramids, and the rest of the organ showed marked amyloid reaction. Ureter normal. Bladder was filled with pus and its mucous membrane was ulcerated in several places and deeply pigmented. Vesiculæ seminales were normal. Epididymis of right testicle was tubercular. The lungs and liver contained miliary tubercles. The oldest tubercular deposit was found in some of the bronchial glands, which contained a gritty, mortar-like material.

Foreign Body in the Nose.—The patient was shown by DR. LAPTHORN SMITH, who stated that he had exhibited a somewhat similar case seven or eight years ago, that of a child about two years old which had been suffering for several months previous to his seeing it from a fœtid discharge from one nostril, which had been treated for catarrh. In that case the cause of the discharge was found to be a piece of wood much larger than could be forced into the child's nose, but which the child had

introduced in a dry and much smaller state. The present case was that of a girl 14 years old, who had been troubled with ozœna ever since she was 3 years of age, and the odor from which had become latterly so very unpleasant, that her parents were forced to keep her in a separate room from those occupied by the rest of the family. She had been treated for catarrh at several public institutions, but, probably owing to the fearful smell, none of the attendants had ever examined her nose carefully. Dr. Smith had himself hurriedly prescribed for her general health at the Montreal Dispensary some years ago, without examining her, as she was supposed to be suffering from the sequelæ of smallpox. But a few days ago she was brought to his office, when on examining her nose with a speculum and probe a hard, grey and glistening object was seen and felt. It was readily removed with a suitable pair of forceps, when it turned out to be a shoe button which she must have introduced ten or twelve years ago, and which he showed to the Society. The button was incrusted with phosphates. There was a little bleeding from the surface of the cavity which it had hollowed out for itself in the nostril. Dr. Smith said that his object in showing this case was to emphasize the importance of making a local examination in every case of this kind, as, if this had been done in the first instance, years of discomfort would have been saved the patient. Although only a short time has elapsed since the button was removed, the ozœna has completely disappeared, and the ulcerated surface was almost entirely healed.

Seven Consecutive Successful Ovariotomies.—Dr. Trenholme exhibited cystic ovaries and enlarged tubes removed last week from Miss G. G., a young woman aged 22, which makes the seventh operation performed since he was last at a meeting of the Society. The patient was of slight build and suffered from a persistent menorrhagia since the menses began. There were at such times severe pelvic pains, and she was unable to perform her daily work by which she had to obtain her living. On examination, finding both ovaries and tubes enlarged, while the uterus was normal, any possible treatment except the removal of the appendages was excluded. The specimens now shown

are much shrunken. The ovaries were as large as a small hen's egg, and so densely adherent that they ruptured during their removal. The tubes were as large as a small finger, filled with blood and so densely adherent that their removal was difficult. The opening into the abdominal cavity was about 2½ inches long, and closed with three silk-worm-gut sutures; horse hair was used for superficial sutures. A few layers of antiseptic gauze held in place by two straps of adhesive plaster completed the abdominal toilet.

Case 2.—Miss S., aged 28; always suffered during menstrual period. Of late has had to use morphia to relieve the increasing distress. All her family having become insane, and fearing for her own sanity, she consulted me. On examination, found enlargement of both ovaries and a small fibroid, size of a plum, in the posterior wall, at the fundus of the uterus. Removed appendages in my usual way. Result, perfect recovery.

Case 3.—Mrs. W., aged 30; always suffered since menses began, but of late the sufferings are intolerable without opiates. Has been under various treatment, but without relief. Found both ovaries cystic and right tube enlarged about one inch in diameter by 2½ long. Recovery from operation and her former sufferings good, but ulcers of rectum have retarded perfect restoration to health.

Case 4.—Mrs. R., aged 32; as a girl was a terrible sufferer during the flow of the menses; has borne three children. After the first, a thrombus formed in right side of pelvis, which was opened after several months suffering; subsequently bore two children, although the sac refilled and escaped several times. During past summer she caught cold, which caused intense suffering. On examination, found a tumor size of fœtal head on right side of uterus and above the former cyst, though close to it. While operating, the walls of the cyst were so friable that it was with difficulty that the thick tarry contents were prevented from entering the cavity of the abdomen. The operation was followed by a tedious convalescence owing to the refilling of the old abscess, which had to be tapped several times. Eventually she made an excellent recovery, although the walls of the abscess are still tender and form a small tumor.

Case 5.—Mrs. D., 22 years, mother of two children. History very like that of case 4. Sufferings are so severe during menstruation that she prefers death to life. On examination, found both ovaries enlarged, also left tube. Result of operation, perfect recovery and the acquirement of sexual pleasure, a thing never before enjoyed.

Case 6.—Mrs. S.; ovarian cyst, 18 lbs.; recovery perfect.

Case 7.—Mrs. C.; enlargement of both ovaries, left one behind the uterus. Diagnosis of suppurating cysts of ovaries. Operation was difficult on account of adhesions, which were very dense and universal. Both ovaries were about the size of hen's eggs and filled with putrid pus, which escaped into the peritoneal cavity. The rotten state of the cyst walls caused rupture with the slightest touch. A curious horn-shaped cyst sprang from the fimbria of the left ovary, back of the fundus uteri, and curling upward and forward over the uterus was attached by the point to the walls of the abdomen. It was about 1½ inches at base and 6 inches long, filled with clear fluid.

Electricity in Gynæcology.—Dr. Lapthorn Smith read the following paper on this subject:—

As all diseases of women may be attributed to disorders of the nerves of sensation, of motion, or of nutrition, three forms of electricity may be employed as remedial agents; and although the subject of electricity in gynæcology is too big a one to bring within the scope of a small paper, still I think I might briefly outline the various kinds of electricity used in gynæcology and the various diseases in which they are rationally indicated.

Disorders of sensation are the most numerous and, perhaps, the most important, because it is pain which most often brings a woman to consult us. In what exactly pain consists nobody knows, but this we do know, that when it depends on disordered innervation alone, we possess a certain remedy for it in the faradic current of tension, or from the long, fine wire. I have many times proved its efficacy in cases of ovarian neuralgia, and in some of them I believe that the necessity of öophorectomy has been done away with. On this point, Apostoli says: "The current of tension alone is very well borne by nearly all

uteri, and in particular by those of hysterical patients; alone the current of tension, with a very great tolerability, and a much greater power of radiation than that of quantity, enjoys the remarkable quality of rapidly calming periuterine pain, and that, too, all the better, and in a manner all the more permanent, when it is employed in cases of neuralgia of an hysterical nature."

"In all neuralgias of the pelvis," he says, "whatever may be their origin, nature or severity, the element of pain can and always should be treated, most often successfully, by the faradic current, and always by the current of tension alone. It is harmless and efficacious only on condition that we conform ourselves to the following rules:—

1. Never to make the patient suffer and never to apply a stronger intensity than she can bear.

2. Make the operations last long and continue them until the appearance of a manifest sedation.

3. Make by means of the bipolar excitor an intra uterine application whenever possible or a vaginal one in other cases."

By these simple means, therefore, we can successfully treat a numerous class of cases, in many of whom the ovaries would have hitherto been removed, and that, too, without curing the pain, which was the very object of removing the healthy ovaries.

In the faradic current of quality—that is, from the short thick wire—we possess a rational treatment for all diseases of the uterus owing their origin, directly or indirectly, to relaxation or loss of tone of muscular fibre. This category includes all forms of flexions and versions, and prolapsus, as well as subinvolution and the pathological conditions resulting from it; for all displacements of the uterus (as may be seen by referring to this rough chart) are due to the organ being too heavy for its supports, or the supports being too weak to hold up the normal weight, or to a combination of the two causes in some cases. As far as flexions are concerned it requires no argument to show that the uterus is a hollow muscular column, held upright on itself by its own

tonicity, and that whenever the walls of that column become weak or relaxed, or whenever the superincumbent weight becomes increased, the column will bend, either forwards or backwards, according to certain principles. Also, it will be admitted by every one that relaxation of the muscular walls of the bloodvessels in the uterus will allow an increased quantity of blood to remain in it and thereby increase its weight.

But it is when we come to talk about the muscle in the uterine supports that people look at us blankly as though they had never heard of such a thing. This unfortunate ignorance of such important structures is probably due to the habit we have fallen into of calling these supports ligaments, which conveys the idea to our mind of fibrous tissue. Others, again, have been brought up with the idea that the uterus was held in its place in the pelvis by means of the folds of peritoneum, which in reality only cover the ligaments, and which are quite incapable of performing the functions which we know the ligaments of the uterus do perform. To those who do not see any muscular tissue in the uterine supports, it is folly to say that those supports can be strengthened by means of the faradic current, which has no beneficial action whatever on peritoneum or ligamentous tissue. I have not time now to argue this matter out, and I must assume for the moment that there is muscular tissue in these so-called uterine ligaments. Now, I have only to remind you that every time a muscle contracts, it developes, in consequence of its improved nutrition; the products of tissue waste being removed by the veins and lymphatics, and room being left for a fresh supply of arterial blood. With the interrupted current we can produce artificially many thousands of contractions at each seance, and in the course of a few weeks treatment we may even bring about hypertrophy of the muscular tissue, in the perineum, vagina, and ligaments. You know that the strength of the blacksmith's right arm is proverbial simply because he makes its muscles contract the most, and medical men engaged in administering faradism through their own bodies, *en route* to their patients, attest the fact that their arms become enormously increased in size thereby.

It is also generally admitted that faradism is an excellent remedy for chronic constipation, because it causes the muscular fibres in the intestine to contract and thereby develop. In fact the faradic current of quantity does directly and at the very spot just what ergot, quinine and strychnine do indirectly after being absorbed by the stomach and carried by the circulation to the affected parts.

While writing this I have just received a letter from a leading practitioner of Toronto, asking me if I could tell him what was meant by the quality current, a term employed in the writings of Engelman of St. Louis. The answer is that it is used to designate the current of tension, as opposed to the current of quantity; but I think it would be better to give the two latter more explicit terms, as both the current of tension and the current of quantity are currents of different qualities. This reminds me of another question which I am asked every day, viz.: Why won't the ordinary McIntosh faradic battery do for gynæcological work? Simply because it only contains one kind of induction coil; and if that coil is long and fine, it is not suitable for diseases characterized by relaxation of muscle. If, on the other hand, it is coarse, it is not only of no use, but positively hurtful in diseases characterized by pain. It is only on condition that the proper kind of current be given in the proper cases that we can hope to have satisfactory results.

You will naturally ask me what have been the results of the two faradic currents in my hands? In suitable cases eminently satisfactory; in unsuitable ones, disappointing. For instance, in cases of procidentia, due to increased weight of the uterus, the increased weight being due to areolar hyperplasia, the use of the faradic current alone will be disappointing, because it has not the power to cause absorption of fibrous tissue. It will, it is true, increase the strength of the supporting muscles, but in such cases something more is required, and that is to reduce the weight of the hypertrophied organ. Fortunately we possess in the continuous current, especially the negative, the means of causing the resorption into the circulation of the plastic exudation. It is a question for investigation whether the pelvic

muscles ever become so completely atrophied as to utterly fail to respond to the faradic stimulus. In that case, of course, it would be useless to employ it.

A brief outline of the following case might be of interest:— Mrs. R., aged about 70, came to my office in a pitiable condition. Her uterus was hanging outside of her body, and the cervix was lacerated and covered with star-shaped fissures and ulcerations. The organ was enlarged in every diameter, the sound entering nearly five inches, and it had a hard feeling to the touch. Her thighs were excoriated, and her clothing was stained with blood coming from the raw surface of the uterus, which stuck to them whenever she sat down. At times she was quite unable to go about. From the 1st to the 18th of September I gave her six applications of the coarse faradic wire in the vagina, with the only result that she felt and was observed to be much stronger, and she was able to go about more. From the 18th September to the 16th October I gave her an intra-uterine application of the coarse wire faradism, with the result that the sound enters at most $4\frac{1}{2}$ inches. As the uterus still came out of the body, though not so much as before, I decided to try the continuous current in order to improve the nutrition of the organ to such an extent as to make it return to a size and weight more nearly approaching the normal. In this hope I was not disappointed, for after giving her bi-weekly applications of the negative current of 100 milliamperes for five minutes each time from the 16th October till the 27th November I was enabled to make the following entries in my note-book:

Nov. 6*th.*—Uterus rarely comes out now, and when it does it goes back of its own accord when she sits down. 9*th*—Excoriation on thighs all gone. 13*th*—Uterus only been down once since. 16*th*—Fissures on os completely healed. 20*th*—Uterus remarkably soft to the touch. 23*rd*—Sound enters only three and a half inches.

Dec. 1*st.*—Discharged for the present, as the uterus has not been down since last time of coming.

I did not see her again till April, '88, when I was called to attend her for paralysis. I took advantage of my visits to ascer-

tain the condition of the womb. I found it still soft, small, and well up in the pelvis, and she stated that it had never given her any trouble since.

This is only one of many similar cases. My general experience has been that we can surely relieve those cases of partial prolapsus, in which the patient complains of a dragging feeling in the back, and which I believe to be due to relaxation of the muscular tissues of the pelvis. Faradism alone is insufficient in those cases in which there is, in addition to relaxation of the supports, an increased weight of the organ to be supported, in which case the trophic action of the continuous current, preferably negative, will be necessary.

The continuous current will form the subject of another paper, but in the meantime I may say that the field for its use is daily enlarging, and, among many others, its employment in strictures is eminently satisfactory.

Stated Meeting, April 20th, 1888.

DR. TRENHOLME IN THE CHAIR.

Drs. J. A. Hutchinson, Brodeur and D. McG. DeCow were elected members of the Society.

Multilocular Cyst.—DR. TRENHOLME exhibited a large multilocular ovarian cyst which he had removed from a woman aged 40. The operation was not one of unusual difficulty, and the patient was doing well. It had first been noticed eighteen months ago, and had grown very rapidly.

Pyelo-Nephritis; Infiltration of Urine with Sloughing of Urethra.—DR. LAFLEUR exhibited specimens for Dr. Shepherd from a case of surgical kidney caused by enlarged prostate. Patient, aged 67, complained of retention of urine, which was relieved by catheterization and followed by infiltration of urine in perineum and scrotum, with formation of abscess between neck of bladder and rectum. Scrotum was œdematous and gangrenous. Through incision in perineum finger could be passed into a cavity about the size of a large walnut, between neck of the bladder and rectum, which contained some necrosed

tissue. Catheter passed through urethra could be felt at posterior part of this cavity for about an inch, the urethra having completely sloughed away in this situation. The pelvis and ureter of the right kidney were dilated and contained ammoniacal urine, but the organ appeared otherwise normal. The left kidney was enlarged, and its capsule was loosened in places. The pelvis and ureter were moderately dilated, thickened and deeply pigmented, indicating chronic inflammation, and contained very foul, thick, greenish-grey muco-pus. The apices of the pyramids projecting into calices of pelvis were necrosed, while the rest of the parenchyma was intensely inflamed, the pyramids being dark red with small yellowish areas, indicating formation of abscesses; in the cortex the same change was taking place, but not to such a marked degree. The walls of the bladder were much thickened, the mucous membrane deeply pigmented and roughened, while the cavity, which was contracted, contained a mixture of ammoniacal urine and dark green muco-pus. The prostate was enlarged, and friable on section. The immediate cause of death was croupous pneumonia affecting lower and middle lobes of right lung.

Concretio Pericardii.—Dr. Lafleur also exhibited for Dr. Wilkins a heart showing complete adhesion of parietal and visceral layers of the pericardium from a patient who had suffered from severe attacks of acute rheumatism.

Suppurative Appendicitis with Pyæmic Abscesses of the Liver.—Dr. Lafleur exhibited specimens from the case and reported that at the autopsy sinuses were found over the lower part of the abdomen, which converged more or less towards right iliac fossa. Pelvic cavity contained five ounces of thin, putrid fluid, with a few flakes of lymph, but the peritoneum was everywhere smooth and glistening. Appendix deeply pigmented and glued to tissues in iliac fossa by firm, inflammatory, fibrous tissue. At its middle was a perforation a quarter of an inch in diameter. From this point sinuses diverged in three different directions. One sinus, which appeared to be the oldest on account of the thickness of its walls and their intense slaty pigmentation, lay beneath the sheath of the psoas muscle, passing

upwards and backwards as far as the ligamentum arcuatum internum, where it formed a cul-de-sac. A second sinus was traced inwards and downwards over the brim of the pelvis into the loose cellular tissue around the bladder and rectum, opening externally in the perineum half way between the scrotum and the anus. The third sinus passed in a curved direction outwards to the abdominal wall, where it divided into several branches, running in the main parallel to Poupart's ligament, upwards towards the iliac crest and downwards into the scrotum. There was no abscess cavity in connection with appendix or cæcum. The liver was enlarged, and on the under surface of the right lobe was a fluctuating swelling the size of a large orange, which contained thick fœtid pus, and was traversed by bands of necrosed tissue. Another abscess cavity existed under the coronary ligament, and a third one, an inch and a half in diameter, was found on the upper surface of the right lobe, which was adherent to abdominal wall in that situation. The liver tissue around these cavities was studded with minute foci of suppuration, showing origin of the large abscess cavities from fusion of multiple lobular abscesses. There were no thrombi in the portal vein or in the vena cava and its main branches. The infection was probably conveyed to the liver from a small branch of the portal vein involved in inflammatory change about appendix or cæcum. The kidneys were anæmic and showed slight fatty changes in tubules. Pericardium contained five ounces of slightly turbid, yellow serum, with a small amount of adherent lymph. There were no endocardial changes. The spleen was enlarged and soft. Brain and lungs were normal. The immediate cause of death was perforation of the appendix.

Dr. Bell gave the following history of the case: The patient, a very stout man, was admitted into the General Hospital in July, 1887, suffering from symptoms of perityphlitis. He was discharged apparently cured in a few weeks, but returned in December with various sinuses over the lower part of the abdomen and scrotum; all these sinuses led into the right iliac fossa, which contained much dense inflammatory tissue. These sinuses discharged a large amount of fœtid pus. Dr. Bell, under whose

charge the patient was, opened up and scraped the sinuses and evacuated many pockets of pus, but could not find the source of the pus in the iliac fossa. The wounds were packed with iodoform gauze and a dressing of washed gauze applied. The The temperature, which had ranged from 100° to 103°F., became normal, and the patient gradually gained strength. Three weeks after he suddenly became maniacal. After this no dressings could be kept on, and the patient's condition gradually grew worse; the temperature became high and irregular, and two weeks later he died suddenly, apparently from collapse. He never recovered his sanity. There was no family history of insanity.

DR. SHEPHERD thought that the direct cause of death was abscess of the liver and pyæmia. The mode of origin of the sinuses from perforation of the appendix was the most interesting feature of the case. Even if a diagnosis could have been made early, the autopsy showed that treatment by abdominal section would not have been more effective. At the operation, owing to the fat in the abdominal walls the sinuses could not be traced. He regarded the iodoform poisoning as one of the incidents of the case, but not as the cause of death.

In answer to DR. RODDICK, DR. BELL said that the temperature was decidedly septic at first, but after evacuation of the sinuses it fell to normal and remained so for weeks. At the time of the operation, he was convinced that all the pus had not been evacuated.

Some Rare Forms of Extravasation of Urine.—DR. BELL read a paper on this subject, which appeared in the May number of the *Canada Medical and Surgical Journal.*

Discussion.—DR. FENWICK was with Dr. Bell at the operation for ovariotomy mentioned in the paper, and was greatly surprised to find the bladder so high up. Sometimes this accidental wounding of the bladder was unavoidable. He had himself once wounded a prolapsed bladder in an operation for hernia, but the patient ultimately made a good recovery. He had seen several cases of mania produced from the use of iodoform; the most recent case was that of a stout old gentleman on whom he had operated for lateral lithotomy. Iodoform dressings were

used, and the patient several days after became affected with mania, which lasted two weeks; he, however, recovered perfectly.

DR. SHEPHERD said that the case of urinary infiltration following wound of the bladder during the performance of an ovariotomy was a very interesting one owing to the probability of death having resulted from iodoform poisoning. He had several cases of mania following operations, in all of which iodoform had been used, though only in small quantities, and he was in doubt whether to attribute the mania to iodoform, the anæsthetic, or to traumatism. In all cases there was an hereditary taint. Only one died, a case of sequestrotomy of the femur in a man aged 25. Acute mania came on in five days after the operation; only about one drachm of iodoform had been used. In another case, a pericæcal abscess in a man aged 40, acute mania came on on the second day and lasted one month. The patient ultimately recovered. A small amount of iodoform was used, and only at the operation. Several of the patient's immediate relatives had died insane, and the patient himself was subject to fits of ungovernable temper. The third was a case of amputation of the breast in a woman aged 60. A mild form of insanity followed from the anæsthetic, and the woman never completely recovered up to the time of her death, a couple of years after, from cerebral hemorrhage.

DR. RODDICK was very much interested in the cases of iodoform poisoning. He believed it is frequently due to idiosyncrasy. He had seen one case follow excision of the breast where iodoform had been used. There was a history of insanity in the family. Tne mania lasted ten days. He thought iodoform should be used with more care. Large quantities are unnecessary; he had found it to produce severe eczematous irritation of the skin. He now uses carbonate of bismuth in preference to iodoform, as it is less irritating. He also sometimes uses boric acid and naphthalin. Lately he had been using hydronaphthol with benefit. It is odorless and non-irritating. Referring to the case of infiltration of urine, he thought the explanation of the case by supposing perforation of the prostate and

posterior layer of the triangular ligament was not necessary, as it is well known that when the membranous portion of the urethra is perforated the urine escapes behind the anterior layer of the triangular ligament—the tendency of the fluid is to infiltrate backwards towards the rectum and not to come forward. If the posterior ligament be perforated, then the urine extends behind the pelvic fascia into the pelvis and is generally fatal.

Dr. Stewart had seen Dr. Bell's first case and regarded it as a case of iodoform poisoning. It is well known that in cases of mania from any cause the mania remains long after the removal of the cause. Cases in which there is much adipose tissue are more liable to poisoning, because the fat decomposes the iodoform in contact with it.

Dr. Armstrong asked if it was necessary to use iodoform at all. Recent experiments have demonstrated that it is devoid of germicidal properties. He thought its use was unnecessary in the treatment of sinuses.

Dr. Trenholme, referring to the case mentioned by Dr. Bell when the bladder was wounded, said he thought the bladder should never be emptied before an operation, as it is much more easily avoided when containing fluid. If it be accidentally wounded, then sutures of shoemaker's thread or silk should be used, not catgut, which is very unreliable.

Selections.

On the Relation of the Diseases of the Kidney, especially the Bright's Diseases to the Diseases of the Heart.—This was the subject of the Middleton Goldsmith lectures delivered before the New York Pathological Society, by Dr. J. M. da Costa. The lecturer first sets himself to solve the question, Whether disease of the heart in itself leads to disease of the kidney? The result of analysis is to the effect that it does not. Of 127 hospital cases (Pennsylvania hospital 76, and Jefferson Medical Clinic 51), set down as valvular disease of the heart, and in all of which the urine was examined for the most part repeatedly and at different times, and in many of which, especially

in the cases of the Pennsylvania hospital, autopsies are recorded, there were in 92, it is especially stated, no evidence of any kidney affection, as shown by the absence of casts, of albumen and in number of instances by the notes of the post mortem changes. The 51 at the Jefferson Medical College Clinic showed but 7 of coexistent renal disease, and when these 7 histories were carefully examined, it was plain that but three of them were really cases of Bright's disease. Of the remaining 4 cases three presented small amounts of albumen, due to congestion of the kidney. In another case the cause of the parenchymatous nephritis was plainly a pre-existent scarlet fever. Next, the cases from the Pennsylvania hospital are subjected to a similar critical examination, with a like result, so that out of the whole 127 cases of valvular disease of the heart, there were but 8 in which any true affection of the kidney really existed—anything more than mere congestion. And among these eight there was not one instance of the contracted or cirrhotic kidney. "I have, by the analysis of the cases, endeavoured to give you a proof how rarely valvular disease of the heart leads to chronic disease of the kidneys other than congestion. When it does, the form of affection is that of a chronic congestion, which, in its turn, passes into a parenchymatous nephritis." But how is one to know he has, as the result of the heart malady, simply a congestive condition of the kidneys or real Bright's disease? On the whole, the most important diagnostic sign with reference to the urine is found in the slight and varying amounts of albumen and in the infrequency of the casts. The character of the pulse, the absence of marked arterial tension, and the precise physical signs of the cardiac disease give us more valuable evidence, as do the absence of uræmic symptoms and of albuminuric retinitis.

Mitral narrowing is the form of heart disease most commonly associated with renal disorders, and next to that mitral regurgitation, so seldom with aortic disease that it is always a question whether a mitral complication is present when kidney engorgement is found. Pure hypertrophy and pure dilatation give us the same form of kidney derangement we have been studying.

But with reference to hypertrophy, unless the cavities are at the same time stretched, we do not find albuminous urine. Thus it existed in only 1 out of 10 cases, noted at the Jefferson Clinic. In pure dilatation, the urine is more commonly albuminous in traces. Still it does not exist in the majority of cases; and it does not appear until the last week of life, even though the dropsical swellings were enormous and the lungs turgid.

With regard to diseases of the kidneys and their combination with diseases of the heart, the combination is a frequent one. Diseases of the kidney are associated with valvular disease of the heart, with hypertrophy, with dilatation and pericardial affection. Dr. Da Costa then analyses the records of the Pennsylvania hospital for ten years of 101 cases of renal disease and those of the Clinic of the Jefferson Medical Clinic, 21 cases, from which he demonstrates that the character of the kidney affection in combination with the valvular lesion of the heart, is, in the vast majority of instances, the contracted kidney. Next stands acute Bright's, where also we find valvular affections, but without the hypertrophy so common in the first group.

The valve lesion is chiefly of the mitral, a thickening with here and there rough deposits. Next in frequency a lesion of the aortic valves, causing either narrowing or regurgitation. The lecturer thinks that a further cause of the valve affection is in the hypertrophy of the heart, forming part of the Bright's disease preceding some general thickening of the valve. The valve becomes stretched, but insufficiently to close the opening. And similarly changes occur in the aortic valves.

The frequent mention of rheumatism in the histories of cases is worthy of notice. Rheumatism may produce the valve injuries at the same time that it leads to other changes in the body; and thus be a general cause both for the valvular affection and for the disease of the kidney and of other textures.

The soft murmurs often heard in Bright's disease, sometimes at the apex, sometimes at the right base, are merely the result of the state of the blood or come from temporary perversion of valve action. Thus the mere hearing of a murmur in the

heart is not a sign of valve affection in Bright's disease, not even when there is coexistent hypertrophy. Such murmurs may be distinguished, as with ordinary hæmic murmurs, from those of organic origin. Diastolic murmurs are always organic.

The hypertrophy of the heart, which exists in combination with Bright's disease, *i.e.*, hypertrophy without valvular disease. The figures already quoted show that hypertrophy has no connection whatever with acute Bright's disease, but hypertrophy is the rule in the chronic form of the malady. Goodhart's (Guy's Hospital Reports, 1886) figures go to show that in 321 undoubted cases of granular kidneys there were 262 cases of marked hypertrophy of the heart. Other figures quoted prove that dilatation, which is pre-eminently of the left side, predominates in chronic parenchymatous nephritis, while pure hypertrophy does so in granular kidney.

It is not always easy to make out hypertrophy. Dr. Da Costa lays most stress on the altered condition of the sounds both at apex and base and the changed position of the impulse. The heart condition becomes a valuable means of prognosis. Where the heart is but slightly affected there will be reason to believe that the case will continue for some time, provided we do not observe signs of uræmic poisoning. Dilatation rarely predominates over the hypertrophy.

The various theories of the cause of the hypertrophy in Bright's disease are then reviewed, concluding with that in which he has most faith, that the hypertrophy, as well as to a great extent the vascular changes, are the result of a common process which takes its origin in the ganglionic nervous system. This view in its main features is the outcome of the researches of the lecturer himself, aided by Dr. Longstreth. Eleven cases are cited, five in detail, in which the cervical ganglia from which the cervical nerves arise were minutely examined, and the lecturer trusts that he has made clear that there exists, associated with the enlarged heart, marked changes in the ganglia of the sympathetic nerve from which the cardiac nerves arise. Suppose this change to be the cause of the lesions in the vessels, we can now readily explain them all. What the ultimate cause

of the lesion of the ganglia may have been cannot be stated, nor can we assume that one cause alone will determine it—gout, lithæmia, rheumatism, alcohol, lead, worry ?—(*Condensed from the Report of the New York Medical Record.*)

A Case of Tumor of the Spinal Cord; Removal; Recovery.—(Medical history of the case by Dr. Gowers.)—The patient was a man, aged 42, who had suffered for three years from localised pain beneath the lower part of the left scapula. The pain varied much; at times it was scarcely felt, at other times it was most intense, and then was increased by movement to such a degree as to render it impossible for the patient to walk. Many medical men were consulted, and the diagnosis varied between aneurysm and neuralgia. Hypochondriacal insanity was even suggested, on account of the irritability of the patient, whose mind almost gave way under the continued suffering. Four months before the operation, first the left and then the right leg became weak, and the loss of power gradually increased to complete paraplegia. The patient was first seen by Dr. Gowers (with Dr. Percy Kidd) on June 4th, 1887. There was then motor and sensory paralysis up to the level of the sixth or seventh dorsal nerves, with intense spasm in the legs, foot clonus, and rectus clonus. The urine was retained, and there was some cystitis. At the level of the sixth dorsal nerves there was severe pain around the trunk, greater on the left side, and increased to agony by any movement. The symptoms pointed clearly to compression of the cord by a morbid process outside it. Caries of the spine could be practically excluded; aneurysm was improbable, although not impossible. The diagnosis lay chiefly between a tumor of the spinal bones and a tumor of the membrane. The indications (described in the paper) made a meningeal tumor rather the more probable. Syphilitic disease could be excluded. An operation afforded the only chance of escape from certain death after intense suffering. Sir William Jenner saw the patient, concurred in the diagnosis, and sanctioned an operation. The patient was aware of the uncertainty of the result, but was extremely anxious

that something should be done.—(Surgical history of the case by Mr. Horsley.) The diagnosis of intradural tumor pressing on the cord appearing to be well founded, an operation was performed for its removal on June 9th. After some difficulty the growth was discovered and removed under strict antiseptic precautions. The wound healed by first intention, and the patient gradually lost the agonising pain, and at the same time gradually recovered motor and sensory power, as well as the control over the bladder and rectum. He remains in perfect health. Appended to the surgical history of the case was a table and analysis, in which the chief clinical facts relating to fifty-seven other cases were recorded, and from which it appears that operation is the only treatment to be adopted in such cases, and that, if it had been resorted to, 80 per cent. should have recovered, whereas all died.—Mr. Haward observed that a case so unique had little in common with the experience of many of them, and it was specially difficult therefore to discuss. One point had struck him forcibly, and that was the great mental change, the change as some had thought to insanity, that had been produced by long and severe pain. From another point of view it taught them that their ideas of the possibilities of interference with spinal cases must be entirely remodelled.—Dr. A. T. Myers inquired the nature of the tumor, of which they had heard nothing. —The Honorary Secretary stated that in the part of the paper which time had not allowed him to read it was fully described as a myxoma.—Dr. Percy Kidd remarked that the mental affection had been a very serious feature of the case, for, though he agreed with the author of the paper that it had only been a disturbance arising from acute and prolonged pain, yet several advisers had at the time considered it as genuine madness. The patient, he was glad to say, was in perfect health now, able to enjoy a dance, to walk at least three miles with a natural gait, and he begged to be allowed to express through him publicly his most heartfelt gratitude to Dr. Gowers and Mr. Horsley.— Mr. Godlee thought that a specially interesting point had been the very large amount of cerebro-spinal fluid which had been discharged. He was anxious to know if Mr. Horsley had con-

sidered it dangerous. In a case under his own care he had removed a large sacral tumor, and found in its centre a small spina bifida, which he had cut and ligatured. The discharge of cerebro-spinal fluid, though through a very fine hole, had been exhausting, and ultimately fatal to the child.—Mr. Herbert Page asked to say a word as having been the author of the statement in a surgical dictionary that trephining of the spinal cord could be of no advantage. He had limited that statement to the cases of fractures and dislocations. He desired not to be the last to congratulate Mr. Horsley on his brilliant success, and agreed with Mr. Haward that they would now have to reconsider much of the surgical treatment of the spinal column.—Dr. Gowers was called on to reply, but remarked that he had not noticed any questions or objections which it would fall to his lot to answer.—Mr. Victor Horsley at once admitted to Mr. Page that when he quoted his words he was only discussing questions of treatment of fractures of the spinal vertebræ, as would have been plain if he had succeeded in further compressing his paper so that it could all have been read to the Society that evening. In answer to Mr. Godlee he said that cases of escape of cerebro-spinal fluid generally did badly, because, he thought, of the septicity of the fluid. He had long been struck with the fact that the skin was not irritated when boracic acid an inch deep was heaped upon it, and it was by this means that he thought he had been able to keep the wound aseptic. The exact amount of the discharge of cerebro-spinal fluid he had not been able to determine, but he found it enough to completely soak a pad of wool two inches thick in twenty-four hours. He had noticed almost the same result with cerebro-spinal fluid in a head case. The large discharge in the present case he considered due to his having not been bold enough to take out the drainage-tubes after the first twenty-four hours, and so allowing a sinus to form. —*Proc. Royal Medico-Chirurgical Society; Brit. Med. Jour.*

Fatigue as a Cause of Disease.—Attention has of late years been directed to the rôle of fatigue in the production of disease, and numerous monographs have appeared,

taking up various aspects of the subject. Much has been written on fatigue of the heart (heart-strain) and the dilatation and enfeeblement thereby resulting. The existing knowledge on this subject is well summed up by Germain Sée in a paper on "Forced Heart," which was published in this journal in the earlier part of 1883. In 1878 appeared a very instructive monograph by Carrieu, "On Fatigue and its Pathogenic Influences," in which the author treats of fatigue of the different systems, muscular, nervous, glandular, of the organs of special sense, and of the cerebrum. Then he studies its pathogenic rôle, establishing the fact that fatigue may be the exclusive cause of disease. About the same time Bouley and Fournol made a careful study of the effects of fatigue and overwork in animals, in which they showed that in such animals a typhoid state rapidly supervenes, followed frequently by death with rapid cadaveric rigidity and putrefaction, subcutaneous and muscular suggilations, etc. Peter, in his clinical lectures, has made it apparent that similar phenomena may occur in the human subject, and has advanced his brilliant doctrine of *autotyphization*.

In a memoir read in 1880 before the Medical Society of Geneva, and entitled "Fatigue," Revilliod shows that the symptomatology of morbid states brought on by overwork (*surmenage*) assumes two principal forms—a typhoid form (oftenest observed) and a cardiac form. The latter is the "irritable heart," or "forced heart," concerning which so much has been written of late years. The typhoid form is sometimes febrile and sometimes afebrile, the febrile cases generally yielding speedily to rest and becoming afebrile. Multitudes of cases of sporadic fever, says Revilliod, occurring in the practice of the ordinary physician might be properly classed among the fevers due to fatigue or overwork. These, lasting from two or three days to a fortnight and lacking all the distinctive features of typhoid, are generally entered as "abortive typhoid," "ephemeral, "gastro-enteric," or "bilious" fevers.

The recent thesis of Victor Rendon, "*Les Fièvres de Surmenage*," (the fevers of overwork), is probably the most complete work that has yet appeared on the subject. According to

this writer, the pathological states which have fatigue for their cause all have a common character, *the typhoidal condition*. He adopts three divisions: (1) typhoid state without fever; (2) typhoid state with fever, but without lesions; (3) typhoid state with transient or permanent lesions.

(1) The first or lighter form is due to a slight degree of fatigue. It is a purely dynamic trouble. The organism soon rights itself by rest.

(2) If the excess of toil is sufficiently prolonged, and without regular periods of rest, the second form makes its appearance, the *acute form*, the true *fever of overwork*. Thus far only the liquids of the organism are altered.

(3) The third form is the result of still more arduous or more prolonged overwork (long, fatiguing marches, toil by day, with night-watching, overcrowding the brain at school, et.) Here there is alteration of the solids as well as the fluids. The organs which are the most likely to be affected are the heart and blood-vessels, the kidneys (as is also the case with infectious diseases) and the spinal cord. This form is called by Rendon the *grave form*. The denomination *sub-acute form* is reserved for cases where death supervenes from exhaustion before any of the morbid phenomena alluded to have had time to be produced. This last form has been noticed in over-driven animals, and in soldiers after prolonged and forced marches.

To explain the morbid effects of fatigue, appeal is made to the facts of physiological chemistry. Work engenders waste products. The function of muscle is the production and movement of animal heat. The material result of muscular life in action is creatine, creatinine, lactic acid, and certain azotized uncrystallizable extractives. The working brain produces leucine, cholesterine, etc. These products of disassimilation, when retained in the organism, are prejudicial to function and to life. Gautier has considerably augmented the list by his discovery of ptomaines and leucomaines. All these effete elements are the ashes by which the animal machine is clogged when the emunctories are oppressed and fatigued. Physiologists have given to these anto-intoxications various names, which often only serve

to conceal our ignorance of the true cause: uræmia, cholæmia, cholesterænia, creatinæmia, etc. The latter denomination is applied by Jaccoud to symbolize the toxic action of the entire group of extractive matters by one of its elements. To Revilliod we are indebted for the rather awkward name extractihæmia. "Here," says this writer, "in the impregnation of the organism with these waste extractives is the real lesion for which we are seeking, for common experience and physiological experimentation prove them to be eminently toxic. This is the explanation of the symptoms engendered by their excess in the economy, which are, in fact, those of fatigue: languor, prostration, myalgia, the 'typhoid state,' fever. We have a right to suppose that according to the predominance of certain extractives, according to the tissue which is the principal sufferer, according to the degree of oxidation, these effete principles provoke hemorrhages, as in three of my clinical cases (vii, xxix, xxx) thromboses (case xxvi) purpura, irritation and thickening, or rarefaction and destruction of the endothelium of the vessels and valves of the heart, vices of nutrition and degeneration of the heart-muscle, of the muscular coat of the arteries, whence arise disturbances of the local circulation, spasm and consecutive paralysis of the capillaries. Then, under the influence of an altered blood, there supervene œdema, congestions, infarctus, gangrenes (case xxvii). The entire nutrition suffers, the intellect is weakened and oppressed, for the accumulated extractives rob the brain and the blood of its oxygen, element necessary for the normal exercise of the vegetative, locomotor and intellectual functions."

The following are some of the facts on which these theories rest:—

(1) Good authorities, as Gubler and Revilliod, have noticed after the subsidence of fevers from overwork, and coincident with the amendment, copious discharges of urea ("*une veritable debâcle d'urée*). Rendon reports several cases in which the same fact was noticed. New experiments (W. A. Hammond and others) have proved that under the influence of hard work urea-production notably augments (33 grammes in a state of rest, 120 grammes after excessive muscular work).

(2) Chalvet in certain cases has proved the augmentation of extractive matters in the blood, while Ranke has shown that the muscle which is alkaline in a state of rest becomes acid by exercise, and that this acidity results from the presence of lactic acid; that this acid in excess has a deleterious action on the organism which manifests itself subjectively by the sensation of fatigue, followed by sleep. Ranke also affirms that the injection of the blood of an overworked animal produces the phenomenon of fatigue in the member which receives the injection.

(3) Liebig, from experiments of his own, finds reason to ascribe especially noxious properties to creatine (also a product of muscular waste), and he allies creatinæmia to uræmia. He has found creatine ten times as abundant in the blood of an overdriven fox as in that of a fox killed while in a state of rest. Since then Cuffer has produced dyspnœa strikingly like the so-called uræmic dyspnœa by injections of creatine.

We have not space to enter into the details of the experiments of Preyer and Keim, in which, by subcutaneous injections of lactate of soda in guineapigs, they succeeded in producing in them the symptoms of acute over-fatigue; nor into the profound studies of Professor Bouchard on the toxicity of the elements of the organism. Enough has been said to indicate what a fruitful field of inquiry is here opened up, and the possibility of rich acquisitions to our knowledge of the causes of disease in the future. In their search after the microbes, pathologists have made too little account of the effects on the economy of poisons which the economy itself generates.—*Boston Med. & Surg. Jour.*

Cases treated with Ipecacuanha Spray.—The ipecacuanha spray was originally introduced by Dr. Wm. Murrell for chronic bronchitis and other diseases of the throat and respiratory organs in consequence of the reputed success attending the use of a nostrum, in both London and Paris, by an irregular practitioner. Dr. Murrell reports a number of cases illustrating its effects in the *Med. Press and Circular* for April 25, 1888. It was difficult to obtain any clue to the composition of the secret remedy, as apparently the proprietor varied the

constituents from time to time in order to puzzle the analysts and escape detection. Some patients said that it was a clear, colorless fluid like water, while others were confident that it was yellow, or red, or even blue. Some thought it was tasteless, while others declared they recognized the not unfamiliar flavor of dry sherry. They all agreed, however, that it was used in the form of a spray, and that its effects were little short of marvellous, a few inhalations affording prompt relief, both to the cough and shortness of breath. It always loosened the phlegm, and frequently gave rise to copious watery expectoration. It obviously belonged to the class of medicinal agents which we call expectorants, and as there was no reason to suppose that it was a rare or unknown drug, the sphere of investigation was considerably narrowed, for many remedies were obviously unsuited for administration by this particular method. A number of preliminary trials were made, which speedily demonstrated that even if the specific were not ipecacuanha wine, that very useful drug entered largely into its composition, and that locally applied in the form of a spray it was capable of affording relief to congested and irritated bronchial mucous membranes. Sometimes the ipecacuanha wine, pure, or diluted with an equal quantity of water, was used with a small steam vaporizer, but more commonly the ordinary hand-ball spray apparatus, such as is employed for the production of local anæsthesia, was preferred. A solution in spirit, made of the same strength as the wine, was found equally efficacious. After a few visits the patient was usually taught how to use the apparatus himself. Most successful results are obtained from the employment of the ipecacuanha spray in cases of chronic bronchitis and bronchial catarrh. In fibroid phthisis there is often a marked improvement, even when no constitutional treatment is adopted. A single inhalation will sometimes restore the voice in cases of hoarseness due to congestion of the vocal cords. It is a matter of little importance whether the spray be given with a hand-ball spray apparatus or with a small steam vaporizer. In either case the spray must be warm, and the patient should not go out for some minutes after inhaling. Care should be taken to see that the spray really

enters the chest, and is not stopped by the arching of the tongue against the wall of the mouth. The best results are obtained by using the spray for about ten minutes three or four times a day. In the majority of cases of winter cough relief will be obtained in ten days.—*Therapeutic Gazette.*

Acute Peritonitis successfully treated with Saline Purgatives.—At the meeting of the Midland Medical Society, March 21, 1888, Dr. Suckling (*Lancet*, May 12, 1888) showed a man, aged 21, who was admitted into the workhouse infirmary on January 6, suffering from acute peritonitis. Three days before admission he was attacked with vomiting and pain in the abdomen; there was constipation. The abdomen was tense and tympanitic, and the abdominal respiratory movements were abolished. There was extreme tenderness above the abdomen; the legs were drawn up; the pulse small and frequent; the expression anxious. He had retention of urine and fever. No tumor could be detected in the right iliac fossa; vomiting was incessant, and pain about the umbilicus greatly complained of. Dr. Suckling thought that the peritonitis was set up by typhlitis, due to fæcal retention. Opium and belladonna were first given, but the vomiting and pain continued. Then half-drachm doses of sulphate of magnesium and sulphate of sodium, with ten minims of tincture of belladonna, were given every four hours. Improvement soon followed this treatment, several liquid motions being passed. On January 9 the vomiting, pain and tympanites had passed off, and a distinct fulness could be observed, with increased resistance to pressure in the right iliac fossa. The medicine was continued, with the result that the motions became more and more solid till the 14th. He continued to complain of dragging pain in the abdomen for some time; but in about three weeks he was able to get up, and five weeks after his admission was allowed solid food. He has since had two or three slight relapses, which at once yielded to purgatives and proper dieting; and at the present time there is a distinct indurated swelling in the right iliac fossa. Dr. Suckling was of opinion that in this

form of peritonitis, and in typhlitis due to fæcal retention, saline purgatives in moderate doses and with plenty of water were of great value.—*Therapeutic Gazette.*

The Origin of Typhoid Fever in Hospitals, and the means suggested for its Prevention.—(Reginald H. Fitz, M.D., in *Boston Med. and Surg. Journal*, May 24, '88.)—The most prolific, if not the sole source of typhoid fever is to be found in the patient himself. His dejections are almost absolutely proven to contain the poison of the disease, and it is possible that secretions from the air-passages may also be infectious. The most thorough-going preventive measures are those which shall destroy the influence of both these agents. The more we regard typhoid fever as contagious in the sense of smallpox and scarlet fever, the more efficient will be our preventive measures. Dried fæces and dried sputum are readily diffused by drafts of air. They are as readily inhaled or swallowed as the emanations from the most contagious of diseases. Prevention is best accomplished by destroying the emanations and burying the remains. The following special directions in typhoid fever are observed at the Massachusetts General Hospital:—

1. Mattresses and pillows (when liable to become soiled) are to be protected by close fitting rubber covers.

2. Bed and body linen are to be changed daily. Bedspreads, blankets, rubber sheets, and rubber covers are to be changed at once, when soiled by the patient. Avoid shaking any of these articles.

3. All changed linen, bath towels, rubber sheets and covers are to be immediately wrapped in a sheet soaked in carbolic acid (1–40). Remove to the rinse house as soon as possible, and soak six hours in carbolic acid (1–40). Then boil the linen for half an hour, and wash with soft soap. The rubber sheets and covers are to be rinsed in cold water, dried, and aired for eight hours. The bedspreads and blankets are to be aired eight hours daily.

4. Feeding utensils are to be thoroughly cleansed in boiling water immediately after being used.

5. Dejections are to be received in a bed-pan containing half a pint of carbolic acid (1–20). The nates are to be cleansed with paper, and finally with compress cloth wet in carbolic acid (1–40).

6. The bed-pan and cloths are to be carried to the tower. Add two quarts of carbolic acid (1–20) in divided portions to the contents of the bed-pan, mix thoroughly by shaking, and throw the liquid into the hopper. The bed-pan and hopper are to be cleansed with carbolic acid (1–20), and wiped dry. The compress cloths used for the above purposes are to be burned at once.

7. The corpse is to be covered with a sheet wet with carbolic acid (1–40), and removed to the Allen Street House.

8. After the discharge of the patient, mattresses are to be thoroughly beaten and aired every day for a week. The bedstead is to be washed with corrosive sublimate (1–1000).

9. These directions are to be followed until the patient is free from fever.

Salicylate of Magnesium in Typhoid Fever.—It will be remembered that a few years ago Desplats and Vulpian strongly recommended salicylate of bismuth in abdominal typhus. They claimed that it not only acted as an antipyretic in this disease, but also as an antiseptic and an antidiarrhœic. According to the views of Huchard the drug loses its value on account of its antidiarrhœal properties, for, he says, copious and free movements of the bowels carry off infectious substances better than anything else. He therefore recommends that salicylate of magnesium be used in its place, and cites a long series of cases in which the drug rendered most valuable service. Its action was much less styptic than that of salicylic bismuth. The manner of preparing the salt is as follows:

The salicylic acid is first dissolved in water, and while the solution is heated to boiling-point, carbonate of magnesium is added until the solution becomes saturated, and finally the salt crystallizes. These crystals form long, colorless needles, which are easily soluble in both water and alcohol, and have a rather bitter taste.

The action of the drug upon the typhoid patient is next observed in the disappearance of weakness, in the disappearance of the foul smell of the mouth, a decrease in the swelling of the abdomen, and a lessening of the decomposed odor of the fæces. The decrease of mortality in cases of ileo-typhus under this treatment is so great, says Huchard, "that the most enthusiastic followers of Brand's water treatment have just cause to be envious." In cases where the drug had been used from the first, complications were but rarely observed. It also has the additional advantage over other drugs in the fact that it may be given in very large doses without producing any disagreeable accompanying symptoms whatever.

P. S. Laut, of the Soc. de Méd. Pratique, said that he had used the drug as prescribed by Huchard for one year, and had always had the best possible results from such treatment. The drug acted both as an antipyretic and antiseptic. The desired result was obtained by doses of 50 to 100 grains daily. In cases where the diarrhœa is copious it is not contraindicated, as even in doses of 100 to 150 grains its laxative action need not be taken into consideration.

The formula of the salt is as follows:

$$\left(C_6H_4\begin{matrix}COO\\OH\end{matrix}\right)_2Mg+4H_2O.$$

It contains 74.6 per cent. of salicylic acid, and the daily doses, as prescribed by Huchard, contain only one-third the quantity of salicylic acid given by Vulpian, who, in the Hôtel Dieu, prescribed no less than 100 to 150 grains of acid "tale quale," to be given daily in wafers.

Salicylate of magnesium, as prepared by Von Heyden, is acid in reaction, and, as it is hygroscopic, is put up in glass bottles. To facilitate its administration the crystals are finely powdered. —*Pharmaceutische Post*, March 18, '88; *Therapeutic Gazette.*

A Successful Operation for Pyloric Stenosis.—Loreta's operation, or the digital divulsion of the pylorus for stenosis, with dilatation of the stomach, was performed, June 11th, by Dr. Wm. T. Bull at St. Luke's Hospital.

The patient, a man aged 37, had suffered for twenty months from daily vomiting, pain, acid eructations, and heartburn, and was much reduced in flesh, despite treatment by lavage of the stomach, careful diet, and internal remedies. He was made the subject of thorough investigation by testing chemically the fluids of the stomach, by Dr. F. P. Kinnicutt, and the diagnosis of stenosis from cicatricial contraction of an ulcer arrived at. The operation confirmed the diagnosis, the pyloric orifice being found so small as to admit only a bougie of a diameter of three-sixteenths of an inch. Through a wound two inches long near the pylorus the orifice was stretched gradually with bougies and the fingers till it was over two inches in diameter. No accident followed the operation, and the patient may be now (June 19th) considered out of danger. There has been neither pain nor vomiting, though for several days considerable quantities of liquid diet have been taken by the mouth. A full report of the case will be presented at the October meeting of the Practitioners' Society. This is the first successful case of this operation yet reported in this country.—*N. Y. Medical Record.*

Treatment of Early Phthisis.—Dr. J. Milner Fothergill, writing in the *Hospital Gazette*, says: "At one well-known hospital, quinine and cod-liver oil constitute the treatment of phthisis pulmonalis, and a very good line, too, but scarcely quite elastic enough. But the principle is there, viz.: to give tonic to the system, and to supply fat for the building up of healthy tissue. It is certainly good practise to give a bitter tonic, as strychnia, for instance, with a mineral acid, as phosphoric acid, with a little sulphate of magnesia, if constipation be present, as is very often the case. If the tongue carry a brown hue, indicative of hepatic disturbance, then sulphate of soda must be substituted for the Epsom salts, *malgré* its nauseous taste. The dietary should consist of fish, fat, and milk puddings, with a little meat. When the stomach is upset, then a little bismuth and soda may be given instead of the tonic; and the food should consist of milk, well-boiled, with some of the many prepared foods on the market, and

beef-tea with the same, or broken biscuit. When the gastric disturbance is allayed, then it is well to go back to the tonic. Blisters are of questionable advantage, and it is difficult to point out the indications for their use. Cod-liver oil may be given when the tongue is clean and the appetite vigorous. It should always be exhibited after food. The same may be said of chalybeates. These measures should be accompanied by fresh air—the purer the better. Bright sunlight, cheerful surroundings, pleasant companions, are matters of no little moment. As to a sojourn in a high-lying Swiss valley, it is in fashion at the present time, though, as one of the very best physicians in Great Britain remarked, 'the cases which will get well at Davos, are those which will get well elsewhere under intelligent management.' There is no altitude too lofty for the tubercle bacillus to climb, if there exist a bit of tuberculous lung to afford it a congenial home. Certainly a low-lying, damp locality, on a clay soil, must be abandoned for gravel or a chalk down; else the case will probably take the wrong direction. Now, for two minor or auxiliary matters. One is the use of inhalations. Plain steam is good in irritative cough with dry air-tubes. Iodine, carbolic acid, eucalyptus, Friar's balsam, or ordinary terebene, are often excellent medications and allay cough. The other is a resort to a cough linctus. On this matter opinions may differ. Some use paregoric to allay ceaseless cough, and do a great deal of harm very often therewith, though paregoric is the least objectionable of "cough medicines." The reckless resort to something "to allay the cough" has, in my experience, been too frequently followed by disaster to recommend itself to a thoughtful practitioner. Something to allay cough and preserve sleep at nights certainly does more good than harm; but "cough stuff" in the day is my abhorrence. It may be no more than prejudice, perhaps. Such, then, are the main lines on which a case of consumption in its early stages has to be carried on; and, on the whole, it will be found to be no unsatisfactory."

THE

Montreal Medical Journal.

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THE ROYAL VICTORIA HOSPITAL.

But little progress has yet been made towards rendering the magnificent gift to this institution available for its benevolent object. The site selected by the donors was an irregular block of ten acres attached to the Mount Royal Park, and was the property of the city. When the donation was offered, the City Council agreed to grant the site to the corporation of the Royal Victoria Hospital. Later on, however, it was suggested to the municipal authorities that the reservoir which contains the water-supply of the city lay dangerously close to this spot, and that a general hospital in that locality might be the means of infecting the water and causing epidemic disease. On the strength of these representations two medical gentlemen were appointed to look into the question and report,—Dr. Geo. Ross acting on behalf of the Hospital, and Dr. S. Lachapelle, of St. Henri, on behalf of the city. These gentlemen held several meetings and discussed the sanitary aspects of the proposed site. As they were unable to agree upon the main principles of the question, they sent in separate reports. Dr. Ross' report deals with the subject of ærial infection, and shows that the experience of recent exhaustive examinations into the possibility of infection from contagious hospitals favor the idea that the communication of these diseases is thus effected only within extremely narrow limits—that the distance between the nearest point of the hospital and the reservoir would be many times greater than any such limits—that it has never been shown that a large body of water is capable of thus receiving germs of disease through the

atmosphere and conveying such disease to persons drinking of it. He did not therefore consider that ærial infection of the water in the reservoir was possible. The next section of the report deals with the question of contamination by escaped leakage and percolation. The trend of the surface and the direction of the rock-beds is shown to be entirely away from the water, and a reference to the levels proves that to reach the basin the sewage would require to run up-hill. It was, however, admitted that cracks or flaws in the rock might possibly direct fluids meeting them towards the reservoir. This was thought to be highly improbable, and a circumstance which could be guarded against.

Dr. Lachapelle thinks danger is not likely to be incurred from the drainage system, but he maintains that the microbes from cases of pneumonia, phthisis, &c., in the general wards of the hospital would pass through the windows, float over the water (more than 800 feet distant), and falling upon it, multiply therein at the rate of 300,000,000 per day—and predicts untold evils for the doomed city whose inhabitants draw upon this reservoir for their drinking water. The site is, therefore, by him unqualifiedly condemned.

We think, to convince others, Dr. Lachapelle's arguments would require to be supported by something more practical and a little less theoretical. If the wards of a general hospital are capable of contaminating the air to such a dangerous degree at a distance of over 800 feet, what shall we say of similar institutions placed in the midst of crowded localities? If there was the slightest foundation upon scientific facts for such wild statements, no hospital should be permitted to remain within a city's limits, but would have to be isolated at an enormous distance from all human dwellings and from all sources of drinking water. Fortunately, such is not the case, but, as our every day experience would suggest, and as science has established, these noxious elements cannot be propagated beyond very narrow limits through the general atmosphere, before becoming inert and free from all further capacity for harm.

THE MEDICAL ACT.

The proposed Medical Act for the Province of Quebec was introduced into the Legislature on the 21st May last. After its second reading it was referred to a special committee of the House. The supporters and the opponents of the Bill were then given an opportunity of being heard. It was well known that there was widespread and formidable opposition to it, although a considerable number of the profession in the Province were in its favor. In committee, Dr. E. P. Lachapelle spoke strongly of the desirability of the Bill becoming law, urging that it would unify examinations, raise the standard of medical education, and put us in a position to secure reciprocity with Ontario and with other countries. Dr. R. P. Howard, Dean of the Medical Faculty of McGill University, opposed the Bill upon the grounds set forth in the Faculty's petition to the Legislature. As this document is an important one as conveying concisely the reasons for the position taken, we reproduce it in full.

To the Honourable the House of Assembly of the Province of Quebec:

The petition of the undersigned members of the Faculty of Medicine of McGill University, respectfully represents:—

That for fifty-five years the Medical Faculty of McGill University has maintained a thorough and efficient course of Medicine, with Hospital and practical work and searching examinations, and has been the means of greatly elevating the standard of medical attainment in this Province and in Canada generally, and that in recent years its course of study has been extended, its lectures increased in number and its laboratories and other means of practical instruction greatly enlarged.

That it has always possessed and has had guaranteed to it at Confederation, as one of the Schools of the Protestant minority, the privilege of sending up its graduates for license to practice, and that this privilege has never in any way been abused by it. Farther, that the course of medical study requisite to entitle to practice has been duly fixed by law, and has always been adhered to by your petitioners.

That the proposed Medical Act, as prepared by the College of Physicians and Surgeons of this Province, contains several important enactments against which the University of McGill College earnestly protests:

I. One of the most important is the creating of a Central

Board of Examiners, who shall have the right to examine holders of the Degree in Medicine of this and other Canadian and British Universities for the license to practice their profession in the Province of Quebec. This is a serious infringemrnt of the rights enjoyed by this University under its Royal Charter, and secured to it in the Act of Confederation. It is an impeachment of the honesty of the examinations conducted by the Medical Faculty of the University, for which there is no justification, and which is disproved by the high standing which the medical graduates of this University occupy throughout the Dominion. Moreover, there are serious objections to the proposed Central Examining Board:—One half of its members being composed of persons not engaged in teaching the subjects upon which they examine, they will lack that completeness of knowledge necessary to make reliable and fair examinations:— race and school jealousies will be certain to develop themselves to the detriment of the candidates and to the destruction of harmony and good feeling amongst the examiners themselves:—the standard of the examinations will be largely determined by the least efficient of the teaching bodies and great injustice will consequently be done to the best institutions:—several of the subjects of the Medical Curriculum are so comprehensive that considerable and important differences in the teaching of those subjects must obtain in the several schools, and prove formidable difficulties to the candidates.

II. The proposition of Section XXIX. of the proposed Act to transfer the power now vested in the Legislature of determining the preliminary qualifications, the duration of study, the subjects of the Curriculum, the time of holding the examinations, etc., to the Board of Governors of the College of Physicians and Surgeons, and to give that Board, by a vote of three-fourths of its members, the power of altering these vital and important matters is fraught with danger to the several Medical Schools of the Province, and tends to deprive them of valuable safeguards which they now possess.

III. The changes in the subjects of the preliminary qualifications of candidates made in the proposed Act are not in harmony with the system of education approved of, and in use in, the English Schools and Universities of this country, and which is recognized by the Educational Law, and differs in many important respects from that preferred in the Schools and Colleges of the majority.

Your petitioners would also represent that the Degree of B.A., as given by the Universities of this Province, should be received as the best guarantee for adequate preparation for professional study, and that this is especially important as

tending to induce students to take a regular University course, instead of merely cramming for arbitrary examinations.

Wherefore your petitioners pray that no legislation for the purpose of transferring the regulation of the course of study from the Legislature to a professional Board, or for obliging holders of the University degree to submit to an examination before a Central Examining Board before obtaining their license to practice, be assented to by your Honourable House; and also that the system of preparatory education now in use in the Protestant Schools and Universities and the Degrees in Arts conferred by the latter should be held as sufficient for entrance into the study of Medicine.

And your petitioners will ever pray.

The University of Bishop's College supported the same views. Dr. Hingston, President of the Provincial Medical Board, stated that the proposition to bring this Bill before the House was carried in that Board by a majority of only one vote. After short discussion, the committee unanimously decided to report to the Assembly against the Bill. The present Act, therefore, remains in force, and it will probably be some time before any radical changes in its provisions are demanded.

THE LATE GERMAN EMPEROR.

Next to the illness of the ill-fated President Garfield, we doubt if any case in recent times has excited so much and such widespread interest and sympathy as that of the late Emperor Frederick. Amongst the medical profession, this has been the case, not only owing to the difficulties surrounding the early recognition of the disease, but also from the diversity of opinions held as to its proper treatment as it passed through its various stages—whilst many will now think that the advice of the German surgeons who advocated instant extirpation of the affected part should have been acted upon. Still the statistics of total removal of the larynx are extremely discouraging—with hardly an exception, the operation has rapidly led to a fatal termination, and even the two patients submitted to the same procedure by no less celebrated an operator than Professor Bergmann himself, since the Emperor's illness began, rapidly succumbed. In view of the enormous fatality of the operation,

one can hardly blame those who decided against it and in favor of the palliative treatment adopted—a treatment which no doubt very much prolonged the life of the illustrious sufferer. The decision to adopt this course was mainly influenced by Sir Morell McKenzie, and under the trying circumstances in which he was placed, we believe that he did his duty faithfully and well, and has merited the distinguished honors bestowed upon him by his Sovereign. Throughout the case, the ablest pathologists in Germany were called upon to aid by making microscopical examinations of portions expectorated or removed for the purpose—and in the whole management of the case, the co-operation and consent of the most trusted surgeons of the Emperor's own country was obtained. The whole case is now a matter of history. Dr. McKenzie's early hopeful view, sustained as it was by the negative evidence of Prof. Virchow's reports upon the histological character, was necessarily destroyed by the subsequent course of events. He himself was certainly of opinion long before the fatal event that the affection was truly malignant disease. This statement is borne out by the fact that he reported to the present Emperor, before the post-mortem examination, that he believed the Emperor Frederick to have died of cancer. There is some reason for the opinion held by many that this view of Dr McKenzie was withheld for important state reasons. It is certain that no matter what course Dr. McKenzie followed, he would have been subjected to the unfavourable criticisms of the German press. That he has in some quarters been severely handled, is therefore no more than was expected. In looking back, however, upon the circumstances with calm and unbiased feelings, it seems certain that he acted for the best, and that the patient's life was prolonged to the utmost limit that was possible, considering the nature of his malady.

—We learn that a new medical society for mutual improvement has been started in Vancouver, B.C. The first president is Dr. Bodington, and secretary, Dr. A. M. Robertson (formerly of Brockville and of McGill University). We are glad to see this evidence of professional activity in the Pacific Province.

Medical Items.

Sulphur in Sciatica.—Dr. Duchesne lately communicated to the *Société Thérapeutique* his successful use of this medicament in sciatica, following directions given to him by Dr. Guéneau de Mussy. The procedure consisted simply in spreading a thick layer of flor. sulphur upon a cloth and placing the member on it in bed. The cure was said by Dr. de Mussy to be effected with great rapidity, and he cited a case in which the application needed to be made during one night only. No attempt was made by Dr. Duchesne to explain the action of the sulphur; he said simply that its only visible effect, apart from that made upon the sciatica, was to quickly give the urine an odor of sulphuretted hydrogen.—*Monit. thérap.*

Boiled Water as an Aseptic.—Microbian cultures flourish in the most concentrated solutions of carbolic acid; and this is also true of sublimate solutions actually as strong as usually recommended. The accidents occasioned by corrosive sublimate, by carbolic acid, and even by iodoform, are so frequent and so well known in the meantime, that one cannot too warmly urge upon surgeons the use of simple water, which after filtration and boiling at 100° C., or better at 120° C., if one has the proper apparatus, is certainly the best aseptic we have at our disposition. While solutions of hydrochlorate of morphine for hypodermic use, made according to the old method with distilled water, are full of micro-organisms and of microbes at the end of five to ten days of use, they are preserved pure and perfectly limpid during weeks, or even months, if water be employed which has been filtered and boiled.—*Gazette de Gynecologie.*

How a London Surgeon was Complimented.—The *Pall Mall Gazette* says: "There is a story going about so good that it ought to be made public, and so improbable that it must be true. A very eminent London surgeon—one of the lights of the profession—the other day observed a gentleman fall in the street. He went to his aid, and found he had broken his leg. It was only a simple fracture, but the man was badly hurt. The surgeon used his umbrella as a splint, and with his

own and borrowed handkerchiefs bandaged the limb tightly, put the patient in a cab, and drove to the nearest hospital. There they were received by a young surgeon or his *locum tenens*. "You've bandaged this very well," said the hospital surgeon. "You flatter me," said the great gun. "Not at all," said the other, "I suppose you have been attending an ambulance class. They say a little learning is a dangerous thing, but the little you've learnt you've put to good account. I can't give you your umbrella now, but if you leave your address it shall be sent home." "I had best give you my card," said the eminent surgeon. And he did so.

—The following poem is entitled by the author as "A Wish." Oddly enough, at his death it was entirely fulfilled:

Spare me the whispering, crowded room,
The friends who come, and gape, and go;
The ceremonious air of gloom—
All, which makes death a hideous show!

Nor bring, to see me cease to live,
Some doctor full of phrase and fame,
To shake his sapient head, and give
The ill he cannot cure a name.

Nor fetch, to take the accustom'd toll
Of the poor sinner bound for death,
His brother-doctor of the soul,
To canvas, with official breath,

The future, and its viewless things—
That undiscover'd mystery
Which one who feels death's winnowing wings,
Must needs read clearer, sure, than he!

MATTHEW ARNOLD.

THE PRACTICE OF LICKING SORE EYES.—At the recent annual meeting of the *Société française d'ophthalmologie* a curious communication was made by Professor Costomiris, of Athens. It seems that ever since the days of Æsculapius the Greek populace have practiced licking sore eyes as a method of cure. For this important office a person is insisted upon who has a clean mouth and good teeth and is not a smoker. If it is a girl, she must not operate during her menstrual period. The lickers must commence work before eating, and they are required to wash out the mouth carefully and then chew a certain quantity of *Galega officinalis*, to take away all germs from the tongue. Dr. Costomiris has watched the practice for

some seven years and found the results very satisfactory in a number of cases of opacities of the cornea, and in keratitis, parenchymatous and diffuse, also in chronic ulcers; so that he recommends it. Very often a member of the family is engaged to do the licking, as it is not easy to get outsiders. The practice may have arisen from seeing animals do the same in cases of eye troubles, and from the popular belief in the efficacy of saliva against wounds. Is it that the covering of saliva keeps out the microbes from the air?

—Some years ago a village quack in Devonshire who was a sort of Jack-of-all-trades, applied to the late Mr. Hawker, then vicar of Morwinstow, in North Devon, to compose for him a handbill such as would adequately describe his many qualifications. The rev. gentleman produced the following:—"Roger Giles, Surgin, Parish clerk and Skulemaster, Groser, and Hundertaker, Respectably informs ladys and gentlemen that he drors teef without wateing a minit, applies laches every hour, blisters on the lowest tarms, and vizicks for a penny a peace. He sells Godfather's Kordales, kuts korns, bunyons, dokters hosses, clips donkies wance a munth, and undertakes to look arter every bodies nayls by the ear. Joseharps, penny wissels, brass kanelsticks, fryinpans, and other moozikal hinstrumints hat greatly reydooced figers· Young ladys and gentlemen larnes their grammur and langedge, in the purtiest manner, also grate care taken of their morrels and spelling. Also zarmzinging, taycbing squadrils, pokers, and all country dances, tort at home and abroad at perfekshun. Perfumery and znuff, in all its branches. Blakin-brishes, herrins, coles, skrubbinbrishes, traykel, godly bukes and Bibles, mise-traps, brick-dist, morrel pokkerankerchers, and all zorts of swatemaits, including taters, sessages, and other gardin stuff, bakky, zigars, lamp oyle, tay-kittles, and other intoxxikatin likkers. Agent for selling gutty-porker souls."—*Hospital Gazette.*

A Curious Way to Advertise an Obstetrician.—The following curious items appeared in the *Cincinnati Enquirer*, under the head of Births:

"Flamin.—Saturday, the 9th inst., at 8-15 a.m., to the wife of D. W. Flamin, of College Hill, a ten-pound boy. Thanks to Dr. Wallingford, of Cincinnati."

"Gallion.—June 5th, to Mrs. Nona Gallion, of Liberty Street, a nine pound girl. Thanks to Dr. Wallingford."

One might suppose that Messrs. Flamin and Gallion would claim some thanks.—*N. Y. Medical Record.*

THE

MONTREAL MEDICAL JOURNAL.

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Original Communications.

ON A CASE OF POISONING BY BICHROMATE OF POTASH.*

BY DRS. R. F. RUTTAN AND H. A. LAFLEUR.

The case which forms the subject of this paper is briefly as follows:—

A young Englishman, Charles Bartley, aged 25, committed suicide by taking about two ounces of bichromate of potassium in the solid form. From the evidence at the coroner's inquest and from subsequent inquiries it was established that he could not have taken the poison before 11.15 A.M. A few minutes later Bartley was found lying in the outhouse, vomiting, purging and in great agony. When seen by the ambulance surgeon of the Montreal General Hospital he was writhing with pain on the floor of the shop, speechless, his mouth, hands and clothes stained with greenish-yellow vomit, surface of body cold, face contorted and of a dusky hue, pupils unequally dilated, pulseless at the wrist, respirations very rapid and shallow, abdomen retracted and painful on pressure, and the knees drawn up to the body. The breath was cold, and the mouth contained a yellow, frothy mucus. The emesis, which had ceased, was brought on again by passing the finger into the back of the mouth. He was taken to the hospital as quickly as possible, a hypodermic injection of ether administered, and an attempt made to use the stomach pump, but without success, the patient dying a few minutes after

* Read before the Medico-Chirurgical Society of Montreal.

arrival, less than one hour from the time of taking the fatal dose. When seen one hour after death, cyanosis was intense over face and neck, and pupils were widely dilated. Autopsy performed forty-eight hours after death. Intense purplish-blue lividity of face and upper part of neck; pupils contracted to a pin's point. Post-mortem rigidity present in all the joints, and very marked. Bright yellow staining of skin around mouth and nose, and on hands. Anus smeared with yellow fæces. Cerebral sinuses and veins of pia mater, which were distended, contained dark chocolate-brown blood of a syrupy consistency, and without clot. Brain substance and membranes normal. The peritoneal cavity contained an ounce of dark-brown fluid. The liver was of an intense purplish-blue color, and hyperæmic on section. The spleen was dark-red and firm. The capsule of the kidneys was non-adherent, and the parenchyma dark purple-red and very hyperæmic. The small intestines were moderately distended, and contained a quantity of olive-green, tenacious mucus, with shreddy pieces of a yellowish color. The mucous membrane shewed evidence of irritation, but nowhere was there loss of substance. The large intestine was very firmly contracted, and contained only a little mucus. The stomach contained a considerable quantity of greenish-yellow, ropy mucus, the mucous membrane being stained a deep olive-green color, and covered in places with a loose membrane which came away in flakes, and under the microscope was found to consist of masses of cylindrical epithelium. No undissolved bichromate was found in the stomach. The bladder was firmly contracted and quite empty. The lungs, which were of a dark blue-black color externally, were crepitant, and contained little blood, also of a dark chocolate-brown color. The cut surface was dark brown and very frothy. The right auricle and ventricle were moderately dilated, and the left ventricle was contracted. The heart contained three ounces of dark chocolate-brown fluid blood, but no clots. A crystal of bichromate of potash, about the size of a split pea, was found on the right side of the upper part of the œsophagus, and a smaller one on the opposite side at the same level. The tongue and the anterior surface of the œsophagus were stained

a bright yellow. The skeletal muscles were all very rigid and of a dull red color. Seventy-two hours after death, when the body was removed for burial, rigor mortis was still very marked. A chemical examination showed that the blood everywhere contained neutral chromates of sodium and potassium. By far the largest quantity was obtained from the veins of the portal system. The blood in the heart and great vessels also contained a very considerable amount, and chromates could be readily detected in the blood of the brain. The liver, as one would expect, contained a larger quantity of the poison than any other organ; its tissue was readily stained of a yellow color by lead acetate, and of a red color by silver nitrate. The kidney also gave these reactions, but not so readily as the liver. On suspending a portion of the kidney for a few minutes in a dilute solution of lead acetate, the cortex was found to be most deeply stained by the chrome yellow, though all parts of the organ became decidedly tinted. The mucous membrane of the stomach was of a green color, from the presence of reduced oxide of chromium. The blood was found to be profoundly altered in color and consistence, and to have lost its characteristic alkaline reaction, being quite neutral to litmus. It remained undecomposed and homogeneous in loosely corked bottles for nearly two weeks after the autopsy. On spectroscopic examination, the absorption bands produced by the blood were found to be identical with those produced by that form of hæmoglobin called methæmoglobin by Hoppe-Seyler—that is, the blood presented a three-banded absorption-spectrum in dilute solution, one band being in the red, near the line C in the solar spectrum and between C and D (wave length 632), the two others lying close together between D and E; the last two formed one black band in more concentrated solutions of the blood. The identity was further confirmed by the action of strong reducing agents. The methæmoglobin could be reduced to hæmoglobin by ammonium sulphide, and again oxidised to oxyhæmoglobin on shaking with air. There being no urine in the bladder, the question of the excretion of the poison by the kidneys could not be determined.

Dr. MacNiven of Glasgow (*Lancet*, 1883, p. 496) made an

analysis of the urine in one case of bichromate poisoning, and could get no indications of the poison although it was present in the blood. This observation we confirmed in the case of a rabbit poisoned by the salt. No trace whatever of chromates could be detected in the urine.

These reactions seem to indicate that the bichromate, on coming in contact with the tissues of the stomach, was partially reduced to the condition of the insoluble green oxide and partially absorbed as chromate, the reduction taking place at the expense of the integrity of the mucous membrane, which was superficially corroded by oxidation. The absorbed bichromate was partially reduced and neutralized by the alkaline sodium salts of the blood, but not rapidly enough to prevent its action on the hæmoglobin.

Poisoning by bichromate of potash is a comparatively rare occurrence, and most of the cases recorded being of quite recent date, are not as yet to be found in the ordinary text-books on toxicology. Taylor, Christison and Blythe have, however, quoted a few cases. Before 1880 there are not more than four or five cases recorded; since then, as the salt became more generally used, a number of cases have occurred in Glasgow and in the great centres of chemical industry on the continent. In nearly all cases the salt has been taken with suicidal intent; only three cases of accidental poisoning are described. In all we have been able to find but fifteen cases recorded, and many of these were not fatal ones.

A synopsis of the commoner symptoms and post-mortem appearances noticed in these cases will show how far this case is typical, and at the same time show how varied are the effects ascribed to this salt. In the first place, the time taken to produce death in this case is shorter than that of any previously recorded case.* In fatal cases, death has usually taken place in between four and twelve hours, but it has been delayed several days. There is but little doubt that the salt is an extremely active poison under certain circumstances. We

* Dr. Waugh has recorded a case (*Lancet*, 1885) in which death ensued fifty minutes after taking a dose of four drachms.

found in one experiment that 10–12 c.c. of a saturated solution of bichromate caused toxic symptoms in a rabbit in fifteen minutes, followed by death in three-quarters of an hour.

The symptoms of poisoning by bichromates seem to vary greatly. In almost all cases the usual symptoms produced by violent, irritant poisons were recognized—*i.e.*, vomiting, diarrhœa, collapse, cramps in the limbs, intense abdominal pain and cold extremities. In nearly all cases ending fatally within a few hours, we find noted the dusky, cyanotic appearance of the face and neck, so marked in the case above described, hands shrivelled and blue like a person in an advanced stage of cholera, cold breath, respiration hurried and shallow or labored and slow, pulse feeble and slow, cold perspiration, severe rigors, followed by narcosis, paralysis of the limbs, and dilatation of the pupils. Besides the above, where the patient has lived many days or survived the effects of the poison, there have been described soreness of the mouth and throat, a feeling of intense uneasiness and languor, with tendency to syncope, specks before the eyes, suppression of urine, and jaundice.

Dr. Wilson (*Med. Gazette*, vol. xxxiii, p. 734) describes the case of a man found dead in bed twelve hours after taking the poison, without any signs of vomiting or purging. The patient was heard to snore loudly during the night. Bichromate of potash was found in his stomach.

In a case reported by Dr. McCrorie (*Glasgow Med. Journal*, May, 1881), difficult wheezing respiration was also a marked symptom.

These cases are particularly noted, because this slow, labored respiration was found by us to be the earliest and to remain up to death the most prominent symptom of rabbits poisoned by this salt.

Very little indeed has been noted regarding the post-mortem appearances produced by this poison. In most cases there are more or less severe signs of gastric and intestinal inflammation, dark engorged liver and kidneys, and in one or two cases the dark appearance of the blood is described. The pathological changes brought about by subcutaneous injection of soluble

chromates have been studied in rabbits by Drs. Yergens* and Posner.† They noticed chiefly the purple liver, the dark, engorged kidney, showing incipient nephritis, and the dark, unnatural blood. They, however, made no distinction between the action of the bichromates and the neutral chromates beyond one of degree; they found the former much more active, but they have apparently entirely overlooked the nature of the blood changes produced by bichromates.

Owing to the indefinite nature of the tissue changes described as the result of poisoning by bichromates, it seemed to be of interest to determine, if possible, what, if any, were the differences between the effects of chromates and bichromates on the system, and to try to ascribe to each salt its own physiological action.

Two rabbits were poisoned—one with bichromate of potash, as described before, the dose being about 15 grains, the other with neutral potassium chromate; the dose given in the latter case was between 20 and 30 grains, the fatal dose, as found by Posner, being about 9 or 10 grains. The rabbit poisoned with bichromate died in three-quarters of an hour with no symptoms of irritant poisoning, no purging or signs of violent pain, the chief symptoms being slowing of the heart, slow and intensely difficult breathing, with blueness of the skin of lips and ears, increasing till death; there was but one convulsion, and that just before death. The rabbit that had taken the neutral chromate showed symptoms of irritant poisoning from the beginning, the first symptom appearing half an hour after; purging, expulsion of urine, convulsions, quick and shallow breathing were the chief symptoms. The post-mortem examination made immediately after death showed that the rabbit which received the bichromate had the same engorged purple liver and engorged kidneys which characterized the action of the salt; the lungs were pale and anæmic; the blood was of chocolate-brown color, and it gave at once the absorption spectrum of methæmoglobin. Thus the chief differences between the two forms of chromate

* Arch. f. Exper. Pathol. u. Pharmacol., Bd. VI, Hft. 1 and 2, 1875.
† Virchow's Archives f. Pathol. Anat., Hft. 2, 1880.

poisoning seemed to be in their effect on the blood. To confirm this, experiments were made with both salts on a solution of oxyhæmoglobin. The merest trace of the bichromate was sufficient to convert into methæmoglobin almost instantly a test tubeful of diluted oxyhæmoglobin; a larger quantity precipitated the proteids and destroyed the coloring matters, the blood then yielding the spectrum of acid hæmatin. Pure neutral chromate had no effect whatever on the oxyhæmoglobin even when added in considerable quantity—*i.e.*, several grains to the test tubeful of dilute blood.

Now the question arose, Is this change in the blood alone sufficient to produce death? The answer may be found in the fact that other substances which are known to modify hæmoglobin in this way are also poisons, and in several experiments we found the symptoms and pathological changes to be similar. A rat was made to inhale nitrite of amyl, and to another was administered nitrous acid gas, till death ensued in each case. Post-mortem examination revealed a similar hyperæmic condition of liver, spleen and kidney, and the same rich purple color of the organs. The blood also gave the spectrum of methæmoglobin immediately after death.

The nitrites of the alkaline metals act on blood solutions, producing methæmoglobin, and they are also poisons. Four decigrammes of the nitrite of sodium were given a rabbit; the toxic symptoms began in twenty-five minutes, and were difficult, slow respiration, no convulsions or evidence of pain, tendency to syncope, blueness of the nose and ears increasing in intensity till death, which occurred in one hour and thirty minutes. The autopsy revealed a condition of the organs indistinguishable from that produced by the bichromate; there were, however, fewer signs of intestinal irritation. The blood gave the methæmoglobin spectrum immediately after death.

Felix Marchand,* in his researches on the physiological action of chlorate of potassium on dogs and rabbits, ascribes to this salt effects quite similar to those observed in the animals poisoned by the other methæmoglobin producers. The plates in Dr.

* Vir. Arch. f. Exp. Pathol. der Pharmacol., Bd. XXII.

Lesser's *Atlas der Gerichtlichen Medicin* illustrating the post-mortem appearances produced by potassium chlorate would serve equally well to illustrate the case of bichromate poisoning which forms the subject of this paper.

There is, then, this difference between the action of normal chromates and of bichromates, that the latter are capable of producing methæmoglobin in blood and the former are not. The great distinction between the salts chemically is that the bichromate is a much more powerful oxidizing agent, and this oxidizing action is the only property it has in common with other substances which produce this alteration in the blood, such as the chlorates, permanganates and ozone. Bichromate of potash may act either as an oxidizing agent or as a soluble chromate. The former property of the salt gives rise to the characteristic blood change, and the latter to symptoms and tissue changes in common with those produced by the neutral salt.

The characteristic action of a bichromate—*i.e.*, its effect on the blood—can only be expected to produce prominent symptoms when large doses of the salt are taken, or when the salt is rapidly absorbed, as contact with the tissues quickly changes it to the neutral salt and none enters the circulation as bichromate. When, on the other hand, small doses have been taken, or, as generally happens, when immediate emesis occurs, and very little of the poison remains in the stomach, the symptoms and post-mortem appearances approach those produced by the neutral chromates.

If the views advanced by Hoppe-Seyler concerning the nature of methæmoglobin be correct—if it is a sub-oxyhæmoglobin, containing less oxygen than oxyhæmoglobin, but more than hæmoglobin, and this oxygen very strongly combined, then methæmoglobin would be unable to play the rôle of an oxygen carrier, and the effect of a large dose of bichromate or of any methæmoglobin-producing agent would be similar to that brought about by inhaling carbonic oxide, viz., to prevent the venous blood from becoming arterial.

This view certainly explains the marked disturbance of respiration which characterizes the action of all these poisons, and which was such a prominent symptom in the experiments on the

rabbits. This hypothesis of the action of bichromates will account for those anomalous cases in which little or no inflammatory or corrosive action has been observed in the alimentary tract, as it is possible for the poison to produce death so rapidly by its action on the blood, and so indirectly on the nervous system, that no marked symptoms of gastric irritation would be observed. The case reported by Dr. Wilson, cited above, is an example of how a bichromate may act when, like a nitrite or potassium chlorate, it attacks the hæmoglobin of living circulating blood.

As a rule, however, we must expect to find in most cases the symptoms of an irritant corrosive poison accompanying those of a simple blood destroyer.

Our knowledge of the nature and mode of formation of methæmoglobin from blood in the living organism is very imperfect. How does it come about that certain reducing agents, *i.e.*, pyrogallic acid and the nitrites, act similarly to ozone, bichromate of potash, chlorate of potash, etc., which are strong oxidizers? To say that the former partially reduces oxyhæmoglobin and the latter partially oxidizes reduced hæmoglobin to an intermediate state (methæmoglobin), is begging the question, unless the last is shown to be a more stable compound than either of the others, and an explanation be offered as to why other reducing agents, such as nacent hydrogen, the alkaline sulphides, etc., and other oxidizing agents, such as hydrogen peroxide, do not act similarly.

This is an interesting question for physiologists, which should be capable of solution by careful experimental study, but there is, besides, an important practical aspect of this case of poisoning that demands our attention. Bichromate of potash is one of the commonest and most generally used salts in the market to-day, and there are no restrictions whatever on its sale. It is not even mentioned in the Poisons Act, though its fatal dose is probably less than two drachms. It is even sold to children to make toy batteries. The number of fatal poisoning cases from the use of this salt is increasing every year, and it is high time that vendors of the salt should at least be compelled to label it "Poison."

INTUBATION OF THE LARYNX.*

By John B. Harvie, M.D.,
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In the treatment of acute disease affecting the larynx which tends to produce stenosis of that orifice, numerous appliances and remedies have been tried with a varying amount of success. Remedies, unfortunately, when applied by mechanical means, or administered internally, if followed by any relief, are certainly very unsatisfactory or very temporary. The only means at our disposal of affording complete relief to the patient, in overcoming permanently the dyspnœa, is in resorting to one of two procedures—namely, the operation of tracheotomy or intubation of the larynx by means of Dr. O'Dwyer's tubes.

Tracheotomy is objectionable from the fact that under many conditions and circumstances it is impossible to gain the consent of the friends. Now it cannot be questioned that many cases have been snatched from a fatal termination by the performance of this operation, and if possible, even recovery amounted only to a clinical curiosity, it is the duty of every physician to give the patient the benefit of the doubt. The after-treatment in tracheotomy, however, constitutes the great bugbear to success, even where the surroundings are of the most desirable character; but, unfortunately, the most frequent demand for this operation is in localities where the most rudimentary idea of cleanliness and sanitary precaution does not exist. It is almost necessary that a medical attendant should be in constant attendance for the first 36 or 48 hours, or in close proximity so that no delay would be experienced in case of accident. The care of the canula constitutes, of course, the point of greatest importance, frequent cleansing being generally necessary and changing the canula for a clean one being requisite about every twenty-four hours.

Intubation by means of O'Dwyer's tubes, however, is less objectionable, from the fact that consent is easily gained and relief is almost instantaneous. The absence of any external

* Read before 2nd District Branch of New York State Medical Association.

wound, together with the complications which are liable to accompany or follow it, stand out prominently in its favor. The introduction of the tube creates no inconvenience whatever, the patient being entirely unconscious of its presence.

As to the time of operating, no positive rule can be laid down. When we know positively that we have a condition which is becoming more aggravated in spite of all treatment, such as is found in the acute inflammatory diseases of the larynx—for example, acute œdema of the larynx or diphtheritic croup,—then I can see no reason why the operation should be deferred until the inevitable symptoms of urgent dyspnœa, cyanosis and approaching asphyxia should supervene. In resorting to an early operation my experience has been that a more favorable prognosis may be entertained where the patient, instead of being allowed to wear himself out on account of the dyspnœa, is relieved by the introduction of a tube. Where the patient's strength has been consumed by a very long and ceaseless struggle for air or the depressing use of emetics, the chances become more hazardous. The tendency to pulmonary collapse, broncho-pneumonia, and extension of the membrane to the bronchial tubes in cases of diphtheria, must certainly be lessened where access of air to the lungs is unimpeded. The operation of intubation relieves the obstruction and keeps the larynx patent. It is not resorted to as a curative agent, but rather to bridge the patient over the period of the disease, where respiration would be impossible on account of the stenosis, and give nature a chance to throw off the obstructing membrane and re-establish a healthy condition. It is also one of the most powerful agents which we can adopt in warding off pulmonary complications. The use of the intubation tube does not require the administration of an anæsthetic; there is no wounded surface or incision of the trachea to be healed up following its use.

Intubation holds out under certain circumstances a much more hopeful result than tracheotomy. The operation of tracheotomy under three years of age is a somewhat difficult operation to perform, and is almost invariably fatal; while intubation is performed with as great facility and with as good prospects of

recovery in the youngest patient as those who are older. Furthermore, intubation will be permitted and lives saved where tracheotomy would never be allowed. During the time the tube remains in the larynx no interference is necessary. There is no danger of its being plugged; the only accident which may arise is the possibility of its being coughed up.

The one great objection to the use of O'Dwyer's tubes is the inability on the part of the patient to take nourishment, and especially liquids. Some children make a fair attempt to swallow, where the box of the larynx is somewhat deep, and the tube can be fairly well covered by the epiglottis, but somehow liquids will find their way down the trachea, and even the slightest amount will cause the most distressing cough. My practice now is to prohibit all food by the mouth, not even the slightest amount of liquid, depending altogether on rectal alimentation to sustain the patient, and if there should be any sign of failure from lack of nutriment, I do not see any objection on the part of a careful manipulator removing the tube at intervals of twenty-four hours and allowing the patient to take a quantity of nourishment. However, considering the short time which the tube generally requires to remain *in situ*, removal for this purpose will not generally be necessary.

I have now done the operation ten times, with two recoveries, seven of my cases perishing before the end of the third day, the eighth living until the fifth day, and twenty-four hours after the removal of the tube, with no return of the laryngeal obstruction, the patient perishing from broncho-pneumonia. In the two instances of recovery, one coughed the tube up at the end of thirty-six hours, and it had to be replaced very soon on account of recurring dyspnœa. Was removed at the end of the fourth day and no recurrence of laryngeal stenosis. In the other case of recovery, the tube was removed at the end of the third day; no dyspnœa returned. In all those instances the cases were of the most unfavorable character, some of the children being operated on simply to render their remaining existence more comfortable, no hope of recovery being entertained. At least in 50 per cent. of those cases there was broncho-pneumonia and

evidence of pulmonary collapse present when the tube was introduced, and in one instance the patient was in almost a moribund condition.

In all the cases which I have treated by the introduction of an O'Dwyer tube, the greatest amount of satisfaction has been expressed by the friends whether the cases turned out favorably or otherwise. The relief which the sufferer expressed was in each case remarkable, discounting by great odds, in my judgment, that following tracheotomy, and in every instance, without exception, the parents of children have expressed themselves to the effect that the operation was a most humane proceeding.

RARE CASES OF SYPHILIS.

By T. G. Roddick, M.D.,
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(Read before the Medico-Chirurgical Society of Montreal.)

It was my privilege some years ago to report before this Society several cases of syphilis in which the disease had assumed unusual phases. With your permission I shall, on the present occasion, extend that list, contenting myself merely with a report of the cases.

Case I.—During the past year a medical man from one of the neighboring States came, accompanied by his wife, to consult me regarding the health of the latter. This lady, aged about thirty, married several years and the mother of healthy children, was in excellent health up to twelve months previous to the date of the consultation. About that time she had a tooth extracted, the operation being difficult, and accompanied by considerable laceration of the gum. The wound in the latter showed no tendency to heal, but became sloughy and indurated. Within a few weeks the glands in the parotid regions and on both sides of the neck below the jaw were found to be enlarged, but having no tendency to suppurate. In due course an erythematous rash made its appearance on the body and extremities, followed later by a papular and squamous eruption. A troublesome sore throat and alopecia occurred to complete the picture.

Up to this stage no specific treatment had been systematically carried out, so that when I saw the patient many months after, a well marked palmar and plantar psoriasis was present. The case was unmistakably one of syphilis contracted through inoculation by the forceps of the dentist, as I took pains to find out that the husband was perfectly free from the disease, and, besides, the history pointed clearly to that as the cause. In all probability the instrument used by the dentist was made the vehicle of contagion by being brought in contact with a mucous patch in the mouth of a syphilitic person previously operated upon. If such be the explanation, it goes to prove the very contagious properties of these secondary lesions, and it shows, besides, that no surgical instrument can be safely used a second time without being subjected to some agent having undoubted germicide properties. I have not since heard of the unfortunate victim in this case, but from the fact that treatment was so long delayed, I should be inclined to fear that the later manifestations would be more than usually severe.

Case II.—Joseph Ashcroft, aged 35, appeared at the Clinic on Venereal Diseases which I was then conducting during the last summer session, and gave the following history: Some eight weeks previously, during an altercation with a fellow-boarder, he was scratched by the latter on the forehead. The wound healed in a few days, but in about two weeks a sore appeared in the exact situation of the wound. This continued to extend until, at the time he presented himself, it had reached the size of a shilling piece, and was raised and indurated. It was covered with a dry scab, and showed no signs of suppuration. The preparotid and many of the cervical glands were markedly enlarged, while those of the groins were slightly so; at the same time, the entire body was covered with a coppery papular and slightly scaly rash, and the fauces were erythematous. No genital sore was distinguishable. Everything pointed to the disease as being syphilitic, and further investigation showed that his assailant was suffering from the disease in the second stage, there being at the time condylomata about his scrotum and anus, the pus from which

no doubt was carried through the nails. The disease has since run a very severe course, notwithstanding the immediate adoption of a thorough mercurial treatment.

CASE III.—Daniel Bain, aged 33, a glass-blower by trade, was admitted to the Montreal General Hospital, March 19th of the present year, having the following history: Seven weeks previous to admission he first noticed a sore on his lower lip, a little to the left of the middle line. It was looked upon as an ordinary cold sore, and although it continued to enlarge, the patient gave it little thought until his attention was drawn to a swelling of the submental glands. He did not seek advice, however, until a rash appeared, when he presented himself at the out-door department of the General Hospital. I found a dry, indurated sore on the lip, in the situation mentioned, with enlargement of the glands on both sides of the neck, and the face, body and extremities covered with a papulo-squamous eruption having the characteristic appearance of a syphiloderm. After he was made aware of the nature of his disease, he instituted inquiries at the glass-works at which he is engaged, and traced the source of inoculation to a fellow-workman who was then recovering from syphilis. The latter refused to present himself for inspection, but the evidence was very conclusive. The man is still under treatment as an out-door patient.

CASE IV.—Augusta V., German, aged 15, fairly healthy, daughter of a washerwoman, was brought to me by a philanthropic lady for advice regarding a troublesome sore on the front of the wrist which had resisted all the ordinary domestic remedies. The sore was oval in shape, being about the size and contour of a small almond, the long axis being across the limb. It was distinctly raised above the surface, surrounded by a bright areola, and surmounted by a thin scab. The tissue in the immediate neighborhood was infiltrated. The epitrachlear and axillary glands were distinctly enlarged, but not painful. The sore had been present for five weeks, having followed a trifling wound. Local treatment only was adopted, although I felt

almost convinced that the sore was syphilitic, the wound having in all probability become inoculated from the clothing of some syphilitic person. In about the accustomed time, namely, between six and eight weeks after induration of the sore became noticeable, a secondary rash appeared. The girl remained under active treatment for two years, the secondary lesions being unusually severe.

CASE V. *Genital Syphilis in a lad under* 14 *years of age.*—S. R., small for his age, but otherwise healthy, was brought to me by his mother, to whom the boy had complained regarding a sore on his penis. On examination, I found a circular, indurated, raised and dry sore, about the size of a sixpence, on the dorsal surface of the penis, nearly midway between the point and root. The organ being small, presented a rather odd appearance, surmounted by this very characteristic sore. The glands in the groin could not only be felt, but could be seen to be enlarged. The case was undoubtedly one of chancre, and apparently of a most virulent type. I soon convinced myself that the lad had not become inoculated in the usual way through coitus, and am still at a loss to explain the occurrence unless, it be one of those rare cases (although it is surprising to me that they do not oftener occur) where the seat or bowl of a water-closet has been the medium of contagion. He had been in the habit of using a closet which was common to several offices in the business part of the city. This unfortunate lad had a most pronounced secondary rash, and is still under treatment after two years, having had several relapses chiefly owing to the fact that the specific treatment was badly borne and had to be discontinued repeatedly.

CASE VI. *Warty growth on the tongue, which yielded readily to mercury; probably congenital.*—Rosa S., aged 22, was admitted to the Montreal General Hospital, under my care, on Nov. 16, 1887, complaining of a growth on her tongue. She had never been strong, being somewhat anæmic; submaxillary glands somewhat enlarged; central incisors slightly notched,

but not characteristic; nose well formed; palate more arched than usual; no nodes; no evidences of keratitis. Her mother died of phthisis; one brother inclined to have weak lungs; a sister had an ulcer on the forehead, which was removed by operation, but lately returned; father alive and healthy. She first noticed a small pimple, as large as a pea, on the tongue about seven months before admission, but took little notice of it until three months ago, when it suddenly began to grow rapidly, and pained slightly on swallowing. When she presented herself at the hospital it had reached the dimensions and shape of a split walnut of medium size, and situated on the centre of the dorsum of the tongue, having all the appearances of a huge circumvallate papilla. It could be handled without pain, and showed very slight signs of ulceration. The latter might have been due to an attempt made a short time previously to destroy it with caustics. I was puzzled to account for this growth. Was it simply warty, or was it cancerous, tuberculous or syphilitic? I had the genitals carefully examined for any evidence of acquired syphilis, but the report was that the hymen was intact, and, indeed, almost imperforate, and the glands in the groin were not at all enlarged. Could the growth be one of those rare manifestations of congenital syphilis which are occasionally met with, especially by the ophthalmic surgeon? Before proceeding to any operative measures I determined to try the effect of constitutional treatment. Accordingly, a quarter of a grain of the protiodide of mercury and twenty grains of the iodide of potash were ordered, the latter to be rapidly increased. Under this treatment the growth melted away as if by magic, so that by the end of five weeks hardly a vestige of it remained, and she was discharged cured within six weeks after admission. I ask, would any but a syphilitic growth have been similarly affected?

CASE VII *illustrates the possibility of the original lesion of syphilis being entirely overlooked, especially when situated within the urethra.*

A. B., a bank clerk, aged 23, came to consult me for a slight urethral discharge coming on three days after connection. He

had injected some astringent solution recommended by a friend before coming to my office, so that when I examined him there was almost nothing to be seen. He called a week subsequently to get further instructions, as he was about leaving to take a post in another part of the country. I again examined him, but without handling the penis. The discharge seemed to be very slight, and I looked upon the case as one of simple urethritis, especially as he had been dissipating considerably. Subsequently I received a letter from a medical man whom he had only recently consulted, asking for some information about the early history of the case, and stating that the patient was now covered with what looked like a secondary eruption, although he could find no trace of the original chancre, the patient having evidently withheld all information regarding the discharge. Being very much interested, I learnt afterwards from the patient himself that while the discharge never entirely disappeared, he regarded it so lightly that he discontinued all treatment soon after his last visit to me. I also ascertained that he had had connection on several occasions indiscriminately within the month prior to the appearance of the discharge. The attack fortunately proved to be a very light one. No induration was ever discovered about the urethra, although the case was evidently one of urethral chancre followed by syphilis of the milder type. The history of a discharge coming on three days after the last connection was misleading.

[The reader of the paper made some remarks in conclusion on the treatment of syphilis, in which he strongly advocated the employment of mercury in the primary stage or as soon as induration of the chancre was pronounced. He strongly deprecated the practice of trusting to the iodide of potash alone in the treatment of the secondary stage. Some of the worst cases he had seen of late secondary and tertiary disease had been treated originally in this way.]

CASE OF PROFOUND LIGHTNING SHOCK WITH RECOVERY.

(Read before the Medico-Chirurgical Society of Montreal.)

This case was reported by Mr. J. B. Paige, who has since graduated at the Montreal Veterinary College, but was at the time of the accident a student of that institution. It was presented to the Society by Dr. Mills, together with remarks on the general aspects of the case and a report on the present condition of the eyes by Dr. Buller.

Last midsummer the subject of the accident, a healthy woman, 20 years of age, married, was sitting in a room, not far from a window, beneath a bird cage suspended to the ceiling by a chain. During a violent thunderstorm lightning struck the chimney of the house, and passing through several rooms in divided streams reached the patient by one of these that followed the chain and bird-cage. The electric fluid entered the body at the temple, and after leaving a few superficial marks in the form of reddened lines, etc, passed from the body by the foot, tearing away some of the shoe in its course. Though others were within a few feet they escaped. Mrs. —— was instantly rendered completely unconscious, neither respiration, cardiac impulse nor sounds could be recognized. The muscles were relaxed and the patient apparently dead.

Mr. Paige, who was on the spot at the moment, at once unloosened her clothes and commenced artificial respiration. Perceiving that the body was gradually getting cold, he applied warm fomentations to the chest, still maintaining the other procedure. There was no evident sign of life for about thirty minutes, when one of the limbs was drawn up. From this time improvement, though gradual, was progressive, and the patient was removed to bed.

By next morning she had recovered power of movement, though the arms were weak and speech was impossible. It should be mentioned that there was great difficulty in getting rid of the saliva, also probably secreted in excess, for some time after the accident. This, taken with the loss of speech, though conscious-

ness had been regained, points to paralysis of the pharynx and adjacent parts.

After a few days the patient was pretty well recovered, and in a few weeks completely, with the exception of the eye of the side on which the lightning entered. There was at first some squinting of this eye, but this was not lasting, nor was the œdema of the lids, though marked on the morning following the accident. There had been constipation, but no arrest of the menses, in progress at the date of the accident.

Dr. Buller gave a detailed account of the present condition of the eyes. Only one was then affected. The lesions were numerous and interesting, though obscure as to exact causation. The field of color vision was greatly restricted. The lesions in this case were as numerous as in any reported (of the comparatively few cases of disordered vision from lightning shock) which have been submitted to ophthalmoscopic examination.

Dr. Mills thought the case important, as showing, like a physiological experiment, the influence of a violent shock to the tissues, and especially to the nervous system. He explained how he thought the various results had been brought about. This instance showed the importance of artificial respiration and maintenance of the temperature in apparently hopeless cases. It was not to be forgotten that the terminations of the great veins and the auricles may beat long after the ventricles have ceased and the pulse cannot, of course, be perceived. So long as this is so, experiment justifies artificial respiration and gives ground for hope. We may yet learn to make use of the vagus nerve as a restorer in such cases. Electricity over the heart is dangerous on account of the possibility of setting up fibrillar action in the ventricles, which is rarely recovered from in mammals.

Correspondence.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,—I wish to draw the attention of your readers to one of the dangers attending the careless use of the hypodermic needle. A patient consulted me the other day for a " tingling and numb-

ness" in her right hand. By her sense of touch alone she was unable to tell whether or not she held a needle between her thumb and forefinger, and as she was a tailoress, it was a great drawback to her work. Examination showed that the loss of sensation was confined strictly to the area in the hand supplied by the median nerve, and that the little finger and ulnar side of the ring finger were not affected. There were no appearances of muscular weakness or atrophy. Further inquiries elicited the following: That this trouble dates from last September, when she had an attack of "Canadian cholera," and that the "numbness" is the same as, and has been continous from, that produced in her hand by a hypodermic of morphia in the forearm which her physician gave her to control the cramps. I have no doubt that some lesion of the median nerve in its course in the forearm, caused by the careless use of the needle, is responsible for the present trouble. How, you ask, would any physician drive a hypodermic needle so deeply into the muscles, when a more speedy effect could be attained without risk by simply injecting into the subcutaneous cellular tissue? Yet I have repeatedly seen needles used just that way, and have often wondered that untoward results did not oftener follow, and it is with the hope of lessening this indiscriminate stabbing with our *vade mecum* that I write this.

J. M. ELDER, M.D.

HUNTINGDON, June 27, 1888.

Reviews and Notices of Books.

A System of Obstetrics by American Authors. Edited by BARTON COOKE HIRST, M.D. Vol. I. Philadelphia: Lea Brothers & Co. 1888.

Encouraged by the phenomenal success of *Pepper's System of Medicine*, Lea Brothers & Co. have undertaken a system of Gynæcology and Obstetrics upon the same plan. They have entrusted the editorial work of the gynæcology to Dr. Mann, and of the obstetrics to Dr. Hirst. The first volume of the Gynæcology appeared some months ago, and was reviewed in this Journal; the first volume of the Obstetrics has just been

issued. It opens with a carefully written article on the history of obstetrics by Dr. Engelmann of St. Louis. The physiology and histology of ovulation, menstruation and fertilization, and the development of the embryo are then described by Dr. H. Newell Martin of Baltimore. Regarding the relation between ovulation and menstruation, Dr. Martin holds that the two processes are essentially independent, but that in the course of evolution they have become closely associated through natural selection, nevertheless they are not necessarily mutually dependent. The article is full and elaborate, far more so than is usually found in obstetric text-books. Supplementing this comes a chapter by Dr. Hirst of Philadelphia on the physiology and pathology of the Fœtus, in which he describes the development of the fœtus and its membranes, the placenta, and the deciduæ, and after considering the various diseases, abnormalities, deformities and monstrosities, concludes with a description of the causes, symptoms, diagnosis and treatment of abortion. Dr. Jaggard of Chicago contributes the article on the pharmacology and pathology of pregnancy, treating fully of its signs, diagnosis and hygienæ, together with the diseases which are apt to complicate its course. Dr. Busey of Washington describes the physiological and clinical phenomena of natural labor, together with the management of labor and the puerperal state. Dr. Reeve of Dayton, Ohio, writes upon the use of anæsthetics in labor. After giving a historical sketch of the introduction of anæsthetics into obstetric practice, he devotes most of his article to chloroform, its actions, dangers and mode of administration. The action of chloral, bromide of ethyl, and cocaine are briefly described, and a note upon the use of ether in obstetrics is added by the Editor. His method of administration is worthy of note, being simple, pleasant and effective. Folding a napkin or thin towel once, he lays it lightly over the patient's nose and mouth. Three or four drops of ether at a time are dropped upon it directly below the point of the patient's nose at the end of each expiration. The vapor is not blown away from nose and mouth, but is all inhaled during the next inspiration. In a few seconds analgesia is produced, and the effect is maintained by one or two

drops let fall every second inspiration. This plan obviates stertorous breathing, frothing at the mouth, and facial congestion. The volume concludes with a scholarly article by Dr. Parvin of Philadelphia upon anomalies of the forces in labor.

The work is sumptuously got up, and on the whole is highly creditable to the authors, editor and publishers.

A Practical Textbook of the Diseases of Women.

By ARTHUR H. N. LEWERS, M.D. London: H. K. Lewis.

This is the latest of Lewis's "Practical Series" of handbooks written by well-known hospital teachers for the use of students and general practitioners. Though by no means taking the place of larger works, such manuals are often useful for hurried reference, as they give a short epitome of the present state of knowledge, tables of differential diagnosis, and clear directions for at least one method of treatment. Dr. Lewers' book is readable, and fairly well up to date, containing, among other things, short descriptions of Apostoli's electrical methods and Weir Mitchell's treatment of nerve prostration and hysteria. Written by an experienced clinical teacher, its tone is clinical and its strong point is diagnosis; the treatment is on the whole sound and good, though occasionally old-fashioned. To American readers, some sections will seem somewhat antiquated and conservative; for instance, Ferguson's glass speculum is recommended as the one most generally useful, Emmet's operation for laceration of the cervix is not even mentioned, and the spray is still deemed necessary in abdominal surgery.

A Guide to the Practical Examination of Urine.

By JAMES TYSON, M.D. Sixth edition. Philadelphia: P. Blakiston, Son & Co.

The appreciation by the public of Prof. Tyson's fifth edition, published in 1886, was so marked that the author has this year issued a new edition of his excellent little work on the examination of urine. There is little or no change in the general arrangement of the book, but considerable matter has been omitted from the fifth edition as no longer required; this has been replaced

by the introduction of new matter carefully selected from the great mass of literature that has recently appeared on this subject. Three new tests for sugar—viz., the phenyl-hydragin hydrochlorate, alpha-napthol and thymol—are added to the already long list of good practical methods of detecting this constituent of urine. These are undoubtedly delicate reactions and are of considerable interest, but the propriety of introducing them into a practical text-book for students and practitioners is rather doubtful. The changes and additions, however, have been, as a rule, made judiciously, and the sixth edition is better than its predecessor, which is the highest compliment we can pay its author. The book still remains the most complete, concise, and the best arranged little work on the subject with which we are acquainted. As an advanced text-book for the student of clinical-chemistry, or as a convenient working book for the practitioner, we have no hesitation in recommending Professor Tyson's Practical Examination of Urine.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, May 4th, 1888.

JAMES PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

Dr. W. G. Stewart was elected a member of the Society.

Hemiglossitis.—DR. SHEPHERD described a case of hemiglossitis which had recently been under his care in the General Hospital. The patient was a young man, 30 years of age, and the glossitis was limited to the right half of the tongue. The attack was ushered in by fever and malaise, and the case rapidly recovered. Dr. Shepherd remarked that this was a very rare affection, and much less severe than ordinary glossitis. It usually occurs in the left half of the tongue.

Severe Burn treated by Skin-grafting.—DR. BELL exhibited a case of severe burn of the forearm treated by skin-grafting. Patient, aged 24, had both forearms severely burnt with boiling beer. After a couple of weeks treatment both forearms and arms from the wrists to two inches above the elbow joints were

found to be deprived of skin and covered with granulations, with the exception of a narrow, irregular patch on the posterior surface of each forearm where vesication only had occurred. On the 6th of January, 1888, the granulating surfaces were scraped with Volkmann's spoons, thoroughly cleansed with sublimate solution, and covered with skin transplanted from the thighs by Thiersch's method. The dressings were removed at the end of three weeks, when it was found that the skin had taken everywhere with the exception of a few small isolated spots. These were afterwards transplanted in the same manner and the skin completely reproduced. The patient has now been at work for over a month and his arms remain perfectly well, the skin remaining unbroken and free from contraction.

PATHOLOGICAL SPECIMENS.

Parenchymatous Nephritis.—DR. H. A. LAFLEUR exhibited for Dr. R. L. MacDonnell specimens from a case of chronic parenchymatous nephritis. Both kidneys were enlarged, soft, and of a mottled, reddish-yellow color. The capsules were non-adherent. The cortex was thickened and its striation indistinct. Under the microscope some of the tubules were found denuded of epithelium, while in others the lumen was occupied by a fatty granular detritus. The glomeruli showed commencing amyloid change.

Epithelioma of Inferior Maxilla.—DR. LAFLEUR exhibited for Dr. Shepherd half of the inferior maxilla, removed for epithelioma secondary to disease of the lower lip. The mass of new growth was situated at angle of the jaw, and contained in its central portion a yellowish grumous material and a thin mucoid fluid. Numerous epithelial cell-nests were seen with the microscope.

DR. SHEPHERD stated that the disease had recurred after removal of the lower lip eighteen months before. The patient was a man aged 50, and in good health. There was some enlargement of the cervical glands. The jaw was removed without much difficulty and with little hemorrhage, but in dissecting out the infiltrated glands in the neck which were behind the vessels the jugular vein was torn and had to be ligated. The

patient made a good recovery, the temperature never rising above 100°. Dr. Shepherd mentioned that this was the fourth time he had tied the internal jugular vein in the course of operations on the neck, and had never seen any bad results follow.

Exostosis Bursata.—DR. BELL exhibited an exostosis which he had removed from the inner border of the lower end of the right femur in a boy 20 years of age. The bony growth, which was about the size of a fameuse apple, appeared to spring from the linea aspera below the epiphysal line. It had a bony pedicle about three-quarters of an inch long and about half an inch in diameter, and grew upwards and inwards at an angle of about 45° with the line of the shaft of the femur. Its surface was rough and covered with cartilage in small isolated pieces, which were closely placed and formed a continuous layer over its surface, and the whole was enclosed in a perfectly formed synovial membrane, which became continuous with the periosteum of the pedicle at the cartilaginous border of the tumor, and contained about half an ounce of clear, amber-colored, viscid synovial-like secretion, in which floated loosely fifty-four small cartilaginous bodies exactly corresponding to the "floating cartilages" occasionally found in joints, especially the knee and elbow. The tumor was said to have been noticed nine years ago as a small *soft and movable* growth, about as large as a marble. It grew steadily, but only four years ago it became fixed and felt hard. It never gave any pain or other symptom except inconvenience and fatigue of the muscles in walking, and especially in going up-stairs. The only record of any similar cases which Dr. Bell had been able to find was in a paper read by Dr. Fehleisen at the fourteenth congress of the "Deutschen Gesellschaft für Chirurgie in Berlin in 1885. In his paper entitled "*Zur Casuistik du Exostosis Bursata*," Dr. Fehleisen reports a case which had recently occurred in Prof. Bergmann's klinik, and refers to another which had occurred in Billroth's klinik in 1863 and which he believes to be the only one on record at this time (April 1885). These two cases corresponded with the case related by Dr. Bell in every particular. In Bergmann's case the synovial membrane contained about 500 loose cartilaginous

bodies (486 were collected), and in Billroth's case 35 were found. The latter case was carefully investigated by Rindfliesch, who came to the conclusion that it had originated, not as an ordinary exostosis from the intermediary epiphysal cartilage, but as an ecchondrosis of the cartilage of the joint, which had pushed out a portion of the synovial membrane, which in time had become cut off from the joint and formed a separate sac over the tumor. Fehleisen, however, attributes these tumors to a developmental error by which a group of cells, separated from the joint and lying dormant as an indifferent cell mass for a variable period, springs into active growth and produces this special form of exostosis. He also points out that, although the ordinary exostoses which frequently grow from the epiphysal line at the ends of the long bones, especially the femur and humerus, are often covered or partially enclosed in bursæ mucosæ, these cavities never contain free cartilaginous bodies. Moreover, he ascribes the origin of the free "floating cartilages" to tufts of the synovial membrane, in which are found minute islands of hyaline cartilage which develop and are set free into the cavity of the synovial sac both in the larger joints and in the exostosis bursata.

Discussion.—DR. SHEPHERD said the case was a most interesting one from the light it threw on the formation of floating cartilages in joints. He was convinced that the little buds of cartilage growing from the inside of the synovial membranes were the origin of the free cartilaginous bodies. They no doubt grew till they fell off from their own weight. This form of exostosis he had never seen before; the ordinary exostosis is comparatively common and grows from the epiphysal cartilage, and stops growing with the maturity of the individual. He had seen two well-marked cases within the last few weeks; one was in a boy of 16 which had reached a considerable size and was continually growing. Billroth, in his Clinical Surgery, mentions a case of oxostosis bursata olecrani.

DR. FENWICK said that this case was a unique one so far as his experience went. He had in his possession a large exostosis of the lower end of the femur. It had firm compact tissue on

the outside, but inside it was made up of loose cancellous tissue with a number of free pieces of bone. He had obtained this from the dissecting-room, and he was unable to say whether or not there was a bursa in connection with it, but it was covered with cartilage.

Patent Foramen Ovale.—DR. RICHARD MACDONNELL exhibited a heart showing a patent foramen ovale. The heart had been found in the dissecting-room last winter. The body from which it was taken was that of a young woman, aged 25, who had died in the Montreal General Hospital of phthisis with empyema. Dr. MacDonnell first saw the case in 1883, when she came to the out-door department suffering from primary syphilis. She was very thin and delicate, but there was no evidence in life that she suffered from any vascular derangement. Her mental faculties were defective. During that year she was a constant attendant at the clinic, presenting many well-marked symptoms of secondary syphilis, notably alopecia, sore throat, and iritis. In 1884 and 1885 she was admitted to the wards on several occasions and her chest was frequently examined, but no evidence of cardiac disease was ever found. The last admission was on May 8th, when distinct evidences of phthisis were seen. She died June 7th, 1887, with extensive softening of right lung and a thickened pleura containing pus. Dr. MacDonnell thus had the case under observation for four years without having noticed any cardiac symptoms or physical signs of defective heart action. The opening in the fossa ovalis was of large size.

Suprapubic Cystotomy.—DR. RODDICK exhibited a calculus weighing 15 drachms which he had removed from a man, aged 52, by the suprapubic operation. Twelve years ago he had removed a stone from the same man by the lateral operation. He remained well up to eighteen months ago, when symptoms of stone reappeared. He preferred the suprapubic operation on this occasion because of the large size of the stone, and because he had formerly performed the lateral operation. He did not suture the bladder. (A full report of this case will appear in a subsequent issue of this JOURNAL.)

Discussion.—DR. FENWICK was present at the operation and

congratulated Dr. Roddick on the success of his operation. He, however, saw no reason why a previous operation should contra-indicate a second one. He had several times operated a second time with success; on one patient he had operated four times successfully. He thought that entering the bladder by the perineum is the most natural way, and there is no danger of hemorrhage and infiltration of urine as in the suprapubic. He had removed very large stones by the lateral method by cutting both sides of the prostate.

DR. SHEPHERD could not agree with Dr. Fenwick that lateral lithotomy was the most natural and easiest operation. In cases of suprapubic lithotomy he preferred to introduce a drain in the abdominal wound and to suture the bladder, so that if the bladder did not unite by first intention there would be an outlet for the urine. The bladder should be drained by a catheter in the urethra.

DR. BELL said the bladder could not be thoroughly drained through the penis. He believed the operation of the future will be suprapubic lithotomy with drainage through the perineum.

DR. RODDICK, in reply, said that the chief reason why he had made use of the high operation was on account of the large size of the stone. With regard to suturing the bladder, recent disastrous results had been reported by Thompson and others.

Poisoning by Bichromate of Potash.—DR. RUTTAN read for Dr. Lafleur and himself a paper on bichromate poisoning, which appears in full in this issue of the JOURNAL.

DR. STEWART asked if Dr. Ruttan thought that the ordinary symptoms produced by nitrites could be explained by the formation of the hæmoglobin.

DR. REED referred to a case of bichromate poisoning reported in the London *Lancet* in which death occurred in 55 minutes. The man had taken four drachms of the salt. Cases of recovery after taking 10 to 15 grains had been reported. Symptoms were vomiting, pain and hemorrhage.

DR. RUTTAN, in reply to Dr. Stewart, said that while the toxic symptoms of nitrites were, in his opinion, undoubtedly due to methæmoglobin, the ordinary nervous symptoms produced by

nitrites could not be so easily accounted for. The methæmoglobin in the blood, by preventing the proper oxidation of cerebral centres, must impair their functional activity. Tne lowered temperature after the administration of nitrite of amyl and potassium nitrite is more easily explained by deficient oxidation produced by this blood change than any other way.

Stated Meeting, May 18th, 1888.

DR. TRENHOLME IN THE CHAIR.

New Members.—Drs. J. H. Bell, R. C. Kirkpatrick, J. A. Springle and J. E. Orr were elected members of the Society.

Malignant Tumor of the Spine.—DR. LAFLEUR exhibited specimens and sections from a case of alveolar sarcoma of the vertebræ. At the autopsy performed for Dr. Bell, a tumor was found involving the posterior part of the bodies and the laminæ of the 9th and 10th dorsal vertebræ and the inter-vertebral cartilage. There was in this situation unusual mobility of the vertebral column and slight prominence of the spinous processes. The new growth could also be felt anteriorly at the base of the pleural sac as a convex bony ring half an inch in thickness, which was found to be the expanded and ossified edge of the 9th intervertebral disk. There was no involvement of the prevertebral structures, but the spinal muscles on both sides of the affected vertebræ were infiltrated. A longitudinal section of the vertebræ showed that the cord was affected only from pressure by the new growth, which completely surrounded it. Below the point of pressure the cord was softened. The ninth intervertebral disk was destroyed, all that remained being a thin calcareous plate between the vertebræ and the ossified edge of the cartilage before mentioned. On the under surface of the left lobe of the liver there was a secondary nodule as large as a small hazel-nut and of a pinkish-white color. This was the only metastatic growth in the body. Microscopically the growth was found to be an alveolar sarcoma, consisting of somewhat large oval cells, with large nuclei in an alveolated fibrous stroma. The cells did not lie free in the alveolus, but were held together by

a network of fine fibres derived from the alveolar wall. In the secondary nodule from the liver the alveolar structure was more obscure. Patient suffered from chronic cystitis and bed-sores, and the immediate cause of death was a double basic pneumonia.

DR. BELL gave the following history of the case:—The patient was a man, aged 60 years, who had long been a hard drinker, but who had never had venereal disease of any kind. He began to complain of "lumbago" in November, 1887, which grew worse until, in the early part of March, his legs grew so weak that he could not get about. Complete paraplegia soon followed, with incontinence of urine, loss of sensation, reaching as high as the superior iliac crests, and great sensation around the abdomen. A painful prominence was noticed over the fourth and fifth dorsal vertebræ, and he experienced great pain in this region when being moved. He sank rapidly, and died from a hypostatic pneumonia.

DR. STEWART said that he saw the patient and found loss of motor power and partial loss of sensation, which were strong indications of pressure. The systemic disturbance was too great to be accounted for except by the presence of malignant disease.

Some Clinical Observations on Syphilis.—DR. RODDICK read a paper on the above subject, which will be found in this number of the JOURNAL.

Discussion.—DR. BELL said that Dr. Roddick's interesting series of cases suggested several cases in his experience in which the disease had been contracted in an unusual way. One case was that of a young lady who had a doubtful-looking sore on her lip which was followed by secondary symptoms. The cause of the primary sore was traced to her having been kissed by a man who at the time was under treatment for secondary syphilis. Later the patient showed many symptoms of secondary syphilis. In his experience, cases treated with potassium iodide are not relieved so rapidly and certainly as when treated by mercury, except in the tertiary stage of the disease. He had met cases supposed to be receiving treatment without mercury which were eally undergoing mercurial treatment.

DR. MACDONNELL said that the peculiar liability of glass-

blowers to take syphilis is mentioned by very old writers on this subject. It is strange that there is not more extragenital syphilis contracted than there is. The habit of using public combs and brushes in hotels and in barber shops is very dangerous, yet he had never heard of a case where the disease was contracted in this way. With regard to treatment, he believes in the use of mercury from the very first. Cases where treatment is delayed are apt to be more violent. Dr. MacDonnell asked Dr. Roddick in what cases of chancre he would recommend the use of mercury at once.

Dr. Shepherd had seen secondary symptoms follow in the case of a girl bitten by another girl on the lower lip. A small indolent but well-defined sore marked the spot where the wound was made. Dr. Shepherd also referred to the case of a medical man, who would not be likely to overlook a specific sore on himself, that came to him with marked secondary symptoms, but could give no idea of how he had contracted the disease beyond the fact that he was exposed to it in the course of his practice. He had never had anything resembling a primary sore. With regard to treatment, he did not believe it was always, nor even generally, possible to abort the secondary symptoms by immediate treatment. The Germans are divided between the value of baths and of mercury. He believed that mercury at least had the power of postponing the secondary rash. He was in the habit of waiting till the early secondary symptoms appeared before beginning specific treatment. He had lately seen several cases of multiple chancre where, after a week or ten days, one or more would take on the appearance of a hard chancre and then only yield to mercurial treatment. Hutchinson thinks that cases can be cured from the beginning, but this has been disputed. A class of patients that are difficult to treat are those in which severe salivation follows very small doses of mercury. He always uses mercury in the primary and secondary stages, but prefers potassium iodide in the tertiary. Where potassium iodide disagrees with the patient, the ammonium salt is often found serviceable. Some recent observations and comparisons go to show that, in Portugal at any rate, syphilis is not of so virulent a type as formerly.

DR. J. C. CAMERON held Hutchinson's opinion as to the curability of the disease. He finds in many cases small doses of grey powder a very efficient way of introducing mercury. He had seen cases of soft external sores that subsequently took on a specific appearance from contamination owing to the presence of an unsuspected hard sore in the urethra. He did not think medical men, as a rule, expressed themselves strongly enough regarding the best means of prophylactic treatment. This is a matter that should be taken up and dealt with by every Board of Health. He advocated a rigid system of inspection. In cities in Europe where this has been done the frequency of the disease has rapidly decreased. He was lately informed by a surgeon of a case where one hundred men had been infected from one source. At a recent meeting of the Academy of Physicians in Paris several sessions were devoted to the discussion of this important subject.

DR. RODDICK, in reply, said he quite agreed with the last speaker that something should be done to protect innocent persons from this disease. In answer to Dr. MacDonnell, he said that the history of a sore was the best guide to the treatment. He finds that if the sore comes on over ten days after exposure in at least 85 per cent. it is hard chancre. In doubtful cases he waits for the appearance of enlarged glands in the groin. It is not to be forgotten that soft sores sometimes take on a specific character after a few days. He had given grey powder in one-grain doses, but not habitually. He usually administers mercury in the form of ¼-grain protiodide pills. He has found that where potassium iodide disagreed with a patient, sodium iodide could be substituted with advantage. In conclusion, Dr. Roddick said he was satisfied that syphilis was less virulent now than formerly. The aggravated rupial syphilis of the older writers is now very rare; doubtless the poison is becoming attenuated.

Stated Meeting, June 1st, 1888.

JAS. PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

Dr. C. W. Haentschel was elected a member.

Fibrous Tumor of the Thigh.—DR. LAFLEUR exhibited the specimen for Dr. Fenwick and said that the tumor, a fibro-sar-

coma, was oval in shape, 7 in. long, 4 in. wide and 3 in. thick, very firm and hard, and invested in a fibrous capsule. On section the central part was found to be ossified, and of a greyish-white colour, while the outer portions were soft and of a pinkish-white colour. The latter showed under the microscope interlacing bundles of spindle cells, with oval nuclei, while the former consisted of an irregular alveolar structure simulating bone, with very few spindle cells.

DR. FENWICK said that the tumor was removed from a woman aged 45. The patient had no constitutional symptoms of cancer and there was no enlargement of the inguinal glands. The tumor felt quite movable, but was bound down by fascia. It was eight years in growing, and its appearance, as a flat, firm swelling, could be traced to a strain caused by lifting a sewing machine. The patient said that she remembered feeling something give way at the time. It was for most of the time quite painless, but latterly on exertion sharp paroxysmal pain was produced. There was no tenderness on pressure, and no spots of softening could be felt. The operation was difficult, as the growth was deeply seated on the anterior surface of the right thigh, beneath the muscles, and was firmly attached to the deep fascia. The patient was now convalescent.

Enlarged Testicle.—DR. LAFLEUR exhibited an enlarged testis recently removed by Dr. Roddick. Testicle was the size of a turkey's egg, uniformly enlarged, and very firm and elastic to the feel. On section the epididymis was found to be entirely converted into a somewhat firm caseous mass of a dull yellow colour. The body of the testis, which was of a greyish color, was studded with gelatinous-looking nodules, having the size and appearance of boiled tapioca grains, and in the centre of each of these was a minute caseating point. Towards the epididymis these caseating points coalesced, forming bands from the Body of Highmore to the circumference of the testicle Microscopic examination showed that each caseating point corresponded to a siminal duct, the lumen of which was filled with a granular detritus, while the caseating process extended to some distance around each tubule. The intercellular tissue was

greatly increased and consisted of a coarse reticulum, in the meshes of which were small lymphoid cells and several multinucleated giant cells. The spermatic cord was thickened and hard, and showed a small-celled infiltration around its lumen which was filled with a granular debris. The case appeared to be a somewhat anamalous one of tubercular testis, the change affecting the body of the testis generally as well as the epididymis; the rapidity of the process was remarkable and might, perhaps, account for the absence of the usual soft semi-fluid caseous matter generally found in such cases.

The following history was furnished by DR. RODDICK: The patient, a thin, anæmic-looking man about 46 years of age, good family history, had had two attacks of gonorrhœal orchitis several years before, from which he apparently perfectly recovered. The present trouble began suddenly in October last without apparent cause, the testicle becoming hard and enlarged after an emission. The pain was never great, although the swelling gradually increased until it reached the size of a large turkey's egg. It was dense in feel, with the exception of a spot on the anterior aspect, which fluctuated, and from which about a drachm of straw-colored fluid was withdrawn with the hypodermic needle. Dr. Wilkins, who first saw the case, strapped the testicle and thus gave great relief from the dragging sensation experienced. He handed the case over to Dr. Roddick, who applied counter-irritation in various forms, but with very indifferent results. Latterly the cord became firmer and more thickened than normal, and on the 20th of June the testicle was excised. The case was looked upon as very obscure, and no diagnosis was made.

Tumor of the Spinal Cord.—DR. LAFLEUR exhibited for Dr. R. L. MacDonnell a small oval tumor removed from the spinal cord at an autopsy. The tumor, which was somewhat bean-shaped, being 2.5 centimetres in length, 1.00 cm. in breadth, and 1.00 cm. in thickness, was situated in the anterior and right surface of the cord, at the level of the sixth pair of dorsal nerves, 17.50 cm. from the cauda equina. It lay between the layers of the arachnoid and was freely movable, being nowhere attached

either to the cord or to the dura mater. Two small nerve filaments from the cord passed behind it, but were only superficially attached to it. The tumor was moderately firm and elastic, and was invested by a distinct, thin, fibrous capsule. On section, it was of uniform consistency and of a yellowish-grey color. Under the microscope, it was found to consist entirely of irregularly distributed bands of nucleated fibrous tissue. No nerve elements and few blood-vessels were found in it. The cord below the tumor was very soft and shrunken.

Dr. MacDonnell said that the patient was a man about 50 years of age and of large frame. Three years ago he began to have difficulty in walking, and complained of severe pains in limbs. The gait at this time was spastic, the reflexes were increased, and there was marked ankle clonus. The paresis in lower extremities increased gradually, the patient becoming finally completely paraplegic, with loss of reflexes and sensation, and loss of power in the anal and vesical sphincters. He remained in this condition for eighteen months, during which time he had complete use of his upper extremities and trunk muscles. The cause of death was a double basic bronchopneumonia. The diagnosis of spinal tumour was not made, the patient being supposed to suffer from selerosis of the lateral columns of the cord.

Dr. Spendlove then read the following paper, entitled

Some Observations upon Tapeworms.

Having met with a number of cases of tapeworm during the past four years, I propose to make some remarks upon what I have observed in connection with them, and the treatment which I have found the most successful in their removal.

Of the several species of tapeworm, two only are common to America—the Tænia solium, or pork tapeworm, and the Tænia medio-canellata, or beef tapeworm. The pork tapeworm is most frequently met with in the Southern States; the beef tapeworm in the Northern States and Canada. The origin of both species in man is from eating raw or underdone measley pork or fish, in the case of the pork tapeworm; and raw or under-

done measley beef, in the case of the beef tapeworm. The measle is seen as a round or oval, hard and whitish body, from the size of a mustard seed to that of a pea; it contains a sac of connective tissue enclosing the solex or lavæ tapeworm. When the measle is swallowed by man, the covering of connective tissue is digested in the stomach, the solex is released, passes into the small intestines, becomes attached to the mucous membrane by its head, develops and grows into the adult worm. The time usually taken for the growth of an adult worm is from three to four months.

The principle differences between the two species of adult tapeworms are the greater length of the Tænia medio-canellata, the larger size of the head, the absence of hooks, the greater length, breadth and thickness of the individual joints, and the more fully developed sexual organs.

Regarding the symptoms, there are none which are diagnostic of tapeworm; it is only when some of the joints have been passed that we can arrive at a positive diagnosis. Yet there are certain gronps of symptoms, principally of a reflex nature, that should make us suspicious of its presence. For example, when we meet with certain cases where several well-marked nervous symptoms are present, without reference to any special lesion of the nervous system,—if there are periods of perfect or nearly perfect freedom, and especially if to these are added various ill-defined symptoms of digestive disturbance, if we do not in these cases have tapeworm in the mind's eye, we often do an injustice to our patient, an injury to our professional reputation, besides helping to feather the nest of the quacks.

Treatment.—It is the treatment with pumpkin seeds, *Eucurbita pepo*, that I wish to direct your attention, and particularly the manner of giving them, which I have found the most successful, and which is as follows: First allow the patient to take a good dinner in the middle of the day; to eat nothing at night; before going to bed take a dose of sulphate of magnesia (Epsom salts) sufficient to cause a free movement of the bowels; after this has taken place, give half to two-thirds of a teacupful of pumpkin seeds free from the shell, direct them to be eaten slowly,

to be well chewed, and to be taken dry. About three hours after give the second dose of sulphate of magnesia; after that the patient can take his regular meals. In the majority of cases the worm appears from 5 to 9 p.m.

I would particularly call your attention to the manner of giving the seeds dry, to be well chewed, and not made into an infusion or emulsion as generally directed.

Regarding the *modus operandi* of the seeds upon tapeworm, from the fact that they act best given dry and well chewed (which is the best method for the absorption of their active principle, a fixed oil), and from the fact that in every case the tapeworms have come away unbroken, and in many cases alive, including the head, I am of the opinion that it acts through the circulation, upon the head, and not as an irritant to the body of the worm. I will cite a few of the more important cases only, to show the action of the medicine.

Case 1.—Painter by trade; brought me some joints of a beef tapeworm he had passed. The only symptoms were slight abdominal uneasiness if he did not have his meals at regular intervals. Gave sulphate of magnesia and pumpkin seeds in the form of an emulsion; no effect. A few days after gave magnesia and the seeds dry; Tænia medio-canellata, twenty-five feet. Three months after, more joints passed; gave magnesia and seeds as directed; Tænia medio-canellata twenty feet. I subsequently obtained some smaller worms of the same species from this patient. I then gave him a mixture of potassic bromide and infusion of gentian. There has been no return in three years. I have found this mixture very efficacious in removing the abnormal condition of the bowels which is so frequently met with in these cases.

Case 2.—Middle-aged gentleman, born in Malta; uses tobacco and liquors in moderate quantities, but habitually and for a long time; brought me several joints of a Tænia solium that he had passed. Gave magnesia and seeds as directed. Tænia solium of seventy feet. No return in three years.

Case 3.—Mechanic, born in the Southern States; had tapeworm for twelve years; repeated attempts at removal during

this time, but never successful in getting the head, and it rapidly grew again. Two years previons to his consulting me he contracted syphilis; secondary symptoms severe and obstinate; had taken mercury for nearly two years; consulted me for the syphilitic lesions and not for the tapeworm; said he had given up all hopes of having it entirely removed, and it gave him no inconvenience beyond the disagreeable sensations produced by its coming down when he was walking, sometimes as far as the knees, returning again to its former abode. Gave magnesia and seeds; Tænia solium twenty feet; no return in four years.

Case No. 1 shows the rapidity with which the tapeworm grows; the whole number being removed within eight months, the second one of twenty feet three months after the first one.

Cases No. 2 and 3 show that the habitual use of tobacco and liquors, that syphilis and the prolonged use of mercury, have no effect upon tapeworm.

ONTARIO MEDICAL ASSOCIATION.

(*Condensed from the Canada Lancet.*)

The eighth annual meeting of the above Association was held in the theatre of the Normal School, Toronto, on the 13th and 14th ult., Dr. Rosebrugh, of Hamilton, President in the chair; Dr. J. E. White, of Toronto, Secretary. The ettendance was large and representative. Drs. Wyeth, Rice, Fox and Horning, of New York, Dr. Johnson, of Danville, Ky., Sir James Grant, of Ottawa, and Dr. Gardner, of Montreal, were present as delegates and invited guests. They were introduced to the meeting and Drs. Rice, Fox, Gardner and Johnson made brief speeches.

The President's address was next in order, and was listened to with attention. After thanking the Association for the high honor conferred upon him, the speaker referred at some length to the benefits arising from medical associations generally. He spoke of the vigorous strength of the Association and of the good effects it must have on the advancement of medical science in Ontario. He believed the interests of the Association and of science would be subserved by affiliation with the

British Medical Association, which is perhaps the most influential scientific body in the world. In giving a history of the advance of medical science during the past thirty years, he congratulated students of to-day upon the transformation which has taken place in the methods of, and facilities for study. He believed that the students are better now *morally*, as well as scientifically, than they were when he was a student; while empiricism is still rampant, truth and principles are generally becoming evolved out of the chaotic mass of facts known to scientists. Hospital facilities are much increased, as are also laboratories and apparatus, giving the student opportunities of *real* improvement, which were unknown even a score of years ago. In his history of the old days of medicine and medical education in Toronto, he introduced the well-known and beloved names of some of the giants of those days, among them mentioning the names of Drs. Widmer, Rolph, Beaumont, King Telfer, Henick and Workman. Dr. Workman was present, and at the mention of his name there was hearty applause, which was repeated when the President said that the "Dublin method" of midwifery, which has been spoken of as a recent discovery, was practised by Dr. Workman forty years ago. The President, resuming, urged that better facilities for scientific research should be provided for students in Canada, so that it would not be necessary for them to go abroad. These facilities being provided, the higher the standard was the better, both for the student and his patients.

SURGERY.

Dr. Grasett, of Toronto, opened the discussion in Surgery with a paper on "Urethral Discharges." The discussion of the subject was taken up by Dr. McFarlane, of Toronto; Dr. Graves, of Fergus; Dr. Burt, of Paris, and Dr. Dupuis, of Kingston. In the course of his remarks, Dr. McFarlane said that it was a shame that in the schools of Ontario, pupils should not be warned of the baneful effects of vicious practices.

Dr. Johnson, of Danville, Ky., followed with a paper on "Soft Myoma," which was listened to with eager inter-

est by all present. Diagrams were used in illustration of the subject. The reader showed that this form of uterine tumor is not one of the secondary changes of the hard myoma, due to degeneration of the newly-formed muscular fabric, comprising the ordinary fibroid, but is an entirely distinct tumor springing from a different source, having a separate histological and clinical history, and a widely different termination.

Dr. Burns, the newly elected president of the Ontario Medical Council, and Sir James Grant, of Ottawa, were at this point introduced to the meeting and were received with with much applause.

Dr. Sheard read a paper on "Typhoid Fever." It was discussed by Dr. Smith, of Tilsonburg; Dr. Mullin, of Hamilton, and Dr. Henderson, of Kingston.

Dr. Holmes, of Chatham, and Dr. Whiteman, of Shakespeare, read papers on "Empyema," and this brought the afternoon session to an end.

Dr. McCollum, of London, now read an excellent paper, showing the most important advances in physiology during the past year.

SUBJECTS FOR DISSECTION.

Dr. Geikie moved a resolution favoring the modification of the Anatomy Act, so as to secure a more adequate supply of anatomical material, the study of anatomy being the basis of all sound medical education.

Dr. Workman said that forty years ago, in cases of hanging, the profession always got the bodies. Dr. Richardson could perhaps explain what use was now made of them. He did not see why students should have to desecrate graveyards, or why the bodies of decent people should be taken from the hospitals, while the body of a criminal was buried within the gaol walls.

Dr. Richardson said the law requires that an executed criminal must be buried within the precincts of the gaol yard. There was no doubt the profession were deprived of bodies which legitimately belong to them. The supply of material was so limited that students would have to go abroad to seek it, much to the detriment of the province.

Dr. Geikie said that the demand of the profession was made in the interest of the public. The motion was carried.

Dr. Mullin opened the discussion on Medicine by an able paper on "Malaria as the cause of disease." The paper went to show that there was an undue tendency to attribute disease to malaria, and consequently a too liberal administration of anti-malarial remedies, not always harmless. The paper was discussed by Drs. Geikie, Workman and Richardson.

SECOND DAY.

The first paper read was by Dr. Hunt, of Clarksburg, on Idiopathic Glossitis. It was ably discussed by Dr. McPhedran, of Toronto, Dr. Brock, of Guelph, and Dr. Metherill, of Freelton, who advocated the use of ice in the treatment of the disease.

The next paper was read by Dr. C. M. Smith, of Orangeville, on "Fractures of the Humerus." The mode of treatment advocated was illustrated by the introduction to the Association of a young man whom Dr. Smith successfully treated by the aid of the splint.

Dr. Gardner, of Montreal, read a paper on "Ruptured Tubal Fœtation," and related a case in which he performed laparotomy with success.

Dr. Johnston, of Danville, Ky., in congratulating Canada on having a scientist like Dr. Gardner, condemned strongly the use of electricity in effecting the death of the fœtus. The knife was the safest remedy.

Dr. Daniel Clark, superintendent of the Provincial Lunatic Asylum, read an able paper on "Neurasthenia."

The Hon. G. W. Ross was introduced at this stage of the proceedings, and made one of his usual happy addresses, which was received with much applause.

Dr. Bray, of Chatham, read a report of a case of "Uterine Hydatids," which was exceedingly interesting.

Dr. McPhedran showed a very interesting case of "Splenic Leucæmia." The patient first came under observation about three months ago. About a month ago the proportion of white

corpuscles to red was about 1 to 15. On that day it was about 1 to 8. An interesting point noted, is that while the number of red corpuscles is decreasing, their color is greatly improved, as is also the general condition and feelings of the patient. The spleen is considerably enlarged.

The last business before the noon adjournment was the viewing of an operating table, which was some time ago invented by Dr. O'Reilly, of the Toronto General Hospital. The feature of the table is that the head of the patient is hidden from view while the operation is going on, and in this way students need not necessarily know who the patient may be.

Mr. Thornburn's practical and interesting paper on "Life Insurance and the Relation of the Profession thereto," was next in order. It was listened to with interest and provoked a good deal of discussion.

Dr. J. A. Temple, of Toronto, read a paper on "The Range of Usefulness of Pessaries," which was followed by another by Dr. Irving, Kirkton, on "Puerperal Eclampsia on the use of Pilocarpin."

COMMITTEE ON ETHICS.

Dr. Barrick read the following regarding the conduct of certain members charged with violating the code:

"Your committee after carefully considering the code of ethics as at present adopted by your association, and which code is really that of the American Medical Association, have come to the conclusion that the time has arrived when the Ontario Medical Association should frame a code of ethics of its own, taking special cognizance of the following points brought under their observation:—(1) That of signs displayed outside of churches or other public places with the names of any practitioner painted on them. (2) That the practitioners employed by the various clubs be renumerated in proportion to the work done. (3) To signs displayed by practitioners outside their houses and to advertisements in the daily papers. (4) To the posting of handbills about the city by practitioners on change of residence. (5) To the advertisement of a certain dispensary for diseases of women in the city, notifying the pub-

lic that advice was free, and that students were not admitted. (6) Your committee beg to recommend the appointment of a committee to formulate a code of ethics and to report at the next general meeting.

The report was read clause by clause and provoked a great deal of interesting discussion.

In the evening, Dr. J. H. Richardson read a paper on "Coroner's Inquests." After a few preliminary remarks dealing with the gravity of the question, the speaker suggested that a committee of the association should be appointed to elaborate some feasible plan for conducting investigations into suspected cases of death more in accordance with the spirit and conditions of an advanced civilization. He believed that the true functions of the coroner ought to be confined to throwing all the light possible on the cause of death, leaving matters purely legal to gentlemen of the legal profession. As to the medical witness, the speaker was more emphatic, condemning the superficial character of the evidence sometimes given touching the cause of death. The usual practice is to entrust the *post mortem* examination to some medical man known to have been acquainted with the deceased, or to have been in some way accidentally connected with him at the time of death. Too little time is afforded the witness to prepare an intelligent report, and consequently, in many cases, the ends of justice are frustrated. If he should afterwards discover that his opinion as to the cause of death was erroneous, no opportunity of putting the case right may ever arrive. A medical witness should have a thorough knowledge of medical jurisprudence, so that it is not every medical man that can be an intelligent witness of the cause of death in cases involving intricate details. As to the coroner's jury, the speaker said that he had not respect enough for it to give it serious attention. It is absurd to believe that twelve men, sometimes gathered from the most ignorant class, can advance the ends of justice. In the opinion of the speaker, the time has arrived when the coroner's jury should be dispensed with.

The views given were discussed at some length by members

occupying the position of coroner, such as Dr. Johnston, Dr. Bray and Dr. Duncan. The consensus of opinion was that coroners' inquests are in many cases defective.

The following committee was appointed to consider the subject and report their finding at the next annual meeting of the association:—Dr. J. H. Richardson, Toronto; Dr. Henderson, Kingston; Dr. Johnston, Toronto; Dr. C. W. Covernton, Toronto; Dr. W. Philp, Hamilton; Dr. White, Toronto; Dr. I. H. Cameron, Toronto; Dr. Duncan, Toronto, and Dr. Powell, Toronto.

The committee is enjoined by the resolution to take into consideration the whole subject of medico-legal investigation of violent or suspicious deaths, and to draft a bill embodying proposed changes, which will be submitted to the Ontario Government in the event of the bill receiving the endorsation of the association at the next meeting.

REPORT OF NOMINATING COMMITTEE.

At this stage of the meeting Dr. McPhedran was asked by the President to read the report of the nominating committee, and is as follows:—President, Dr. W. H. Henderson, Kingston; 1st vice-president, Dr. Geikie, Toronto; 2nd vice-president, Dr. Howitt, Guelph; 3rd vice-president, Dr. Day, Trenton; 4th vice-president, Dr. Aikman, Collingwood; corresponding secretaries, Drs. Lovitt (Ayr), Gillies (Teeswater), Trimble (Queenstown), Leonard (Napanee); secretary, Dr. J. E. White, Toronto; treasurer, Dr. N. A. Powell, Toronto.

When the President rose to put the motion for adopting the report, Dr. Walker rose and said that he did not believe it was in the interests of the society to retain officers for a long term of years. Such a course, the speaker thought, would lead the association into ruts and grooves of an unhealthy character. He therefore proposed that Dr. White's name as secretary be replaced by Dr. Wishart's, but with respect to the other officers he did not propose to offer any opposition.

The motion was the signal for a heated discussion on the constitution, many of the speakers maintaining that no person

could be elected to an office without his name being brought before the nominating committee, and, consequently, that Dr. Wishart could not be legally elected by the course proposed to be taken.

Dr. Wishart asked leave to retire from the contest, but his friends vigorously protesting, he had no other course left him but to continue in the field.

At last a motion was carried adopting the report, office by office, and by ballot.

The President did the balloting for the whole association, but when he came to declare Dr. White duly elected, a motion was made referring back the report to the committee with instructions to them to place the name of Dr. Wishart with that of Dr. White for the office of general secretary. The motion was carried by a vote of 29 to 15.

Dr. White then rose and, after resigning his position of secretary, walked down from the platform to the body of the hall. The affair did not stop here, for the President began at once to call for a vote on the two candidates before the meeting. This course called forth vigorous protests from Dr. White and his friends, who declared that he was no longer a candidate. An end was put to the discussion by Dr. Richardson, who moved that Dr. White's resignation be accepted, and that he be tendered the hearty thanks of the society for his services during the last nine years.

The motion was carried, and the President declared Dr. Wishart duly elected secretary.

On motion Dr. White was granted an honorarium of $100 for his services during the past year.

The treasurer's report was read, showing the annual receipts to have been $502, and that there was a balance, after all demands were met, of $227.59.

The retiring President introduced the newly elected President to the Association, after which the meeting was declared at an end.

The next meeting will be held in Toronto, a report to that effect having been made.

NEW BRUNSWICK MEDICAL SOCIETY.

The eighth annual session of this Society met in the Oddfellows Hall, St. John, on the 17th July. The attendance was unusually large.

The President, Dr. P. R. Inches, opened the proceedings with an address, reviewing chiefly the work of the Society during the past seven years, and made touching allusions to the late Drs. Hamilton, Earle and Botsford, all of whom, former presidents of the Society, had died within the past year.

A lengthy discussion took place on the report of a committee appointed at the last meeting to consider "the attitude of the medical profession towards the sale of intoxicants," with other questions bearing on the same. No decision was arrived at, the matter being referred back to the committee.

The first paper read was by Dr. A. D. MacDonald, on Puerperal Fever. He was followed by Dr. Steeves on the allied subject of Puerperal Insanity. Dr. T. C. Allison next read an exhaustive dissertation on Ununited Fracture and False Joint. Dr. G. A. Hetherington followed with an excellent paper on Leprosy. He gave the results of a personal examination of the lazaretto at Tracadie and a history of the institution. Views of the hospital and its patients, as taken by the doctor, were exhibited while reading the paper. Dr. Hetherington stated that several lepers are still at large in the northern part of New Brunswick, and that means should be taken to have them confined. He does not, however, consider the disease contagious in the ordinary sense of the term. The session closed with a paper by Dr. Johnston on the Treatment of Dyspepsia by Papaine, which elicited a very lively discussion.

The election of officers for the ensuing year resulted as follows: President, Dr. McLaren; 1st Vice-President, Dr. McDonald; 2nd Vice-President, Dr. Duncan; Secretary, Dr. Crawford; Trustees, Drs. Addy, Christie and McCleary.

In the evening a conversazione was given by the St. John Medical Society, thus ending a most pleasant and profitable session.

Selections.

Codeine to Relieve Pain in Abdominal Disease.—Dr. T. Lauder Brunton says of the use of codeine to relieve pain in abdominal disease: The class of cases in which I have used it is, I think, somewhat different from those in which it has previously been recommended, because while Barbier, Aran and others have chiefly employed it in gastralgia and painful disorders of the stomach, I have used it chiefly in pain affecting the intestines and lower part of the abdomen. The kinds of cases in which I have used it have been very varied. As examples I may shortly describe one or two. In one case which I saw with Dr. Eccles, there was high temperature, intense pain in the right iliac fossa, with considerable swelling, so that there could be little doubt that there was inflammation around the cæcum, although examination after the acute symptoms had subsided showed that there was also pelvic cellulitis. In this case one grain of codeine, given in the form of a pill, relieved the pain at once, and repetition of the dose whenever the pain began to return prevented its becoming at all severe.

In another case, seen with Dr. Philpot of Croydon, a lady, aged 50, had pneumonia of the right base, a greatly dilated heart with very irregular action, pulse so rapid and weak that it could hardly be counted, and pain over the epigastrium and spreading out from it. She was slightly jaundiced, and a tumor was felt in the right lateral abdominal region, which descended with respiration, but was partly covered by intestine, and could be moved from side to side, so that it seemed to be renal rather than hepatic. As no post-mortem examination was obtained the exact diagnosis could not be established, but the administration of codeine in half-grain doses relieved the pain, as Dr. Philpot said, "as if by magic."

In another case, seen with Dr. Pardington at Tunbridge Wells, there was pain in the abdomen depending upon a mass of impacted fæces in the transverse colon. In this case codeine seemed to be especially indicated, as one wished to relieve the pain without interfering with the action of the bowels. In grain

doses codeine relieved the pain, and the use of copious enemata, aided by washing out the stomach, cleared away the impacted mass which had given rise to the disturbance. I have tried codeine in cases of long-continued abdominal pain for which no definite cause could be assigned, as no tumor could be felt, and the functional disturbance did not seem sufficient to warrant a diagnosis of malignant disease. I have tried it in cancer of the liver and pancreas with success in relieving pain, and also in numerous cases where the age of the patient, the presence of diarrhœa, tenderness on pressure, and visible peristaltic movements and thickening of the gut, easily perceptible on palpation, led to the diagnosis of malignant disease in the intestine, although inability to obtain a post-mortem examination prevented the confirmation of the diagnosis. In such cases I generally begin with half a grain, in the form of a pill made up with extract of gentian, three times a day; and if this is insufficient to control the pain I increase the dose to a grain, and give it as frequently as seems necessary. As a rule, I find that it does not produce drowsiness, nor has it interfered with the digestive functions.

To sum up, the results I have obtained from the administration of codeine have satisfied me that it has a powerful action in allaying abdominal pain, and it can be pushed to a much greater extent than morphine without causing drowsiness or interfering with the respiration or with the action of the bowels. It is therefore specially indicated in such a case as Dr. Philpot's, which I have already mentioned, where the dilated heart and consolidated lung tended to make one afraid of morphine. Codeine is also specially indicated in a case like Dr. Pardington's, where one wished to relieve the pain without interfering with the action of the bowels. On the other hand, in cases where there has been much diarrhœa, as in some cases of malignant disease of the colon or rectum, the absence of any tendency to lessen peristaltic movement is rather a disadvantage to codeine as compared with morphine or opium.

I have found that in cases of long-continued enteralgia without organic disease, it has continued to relieve pain for months together, without the dose being increased beyond one grain

three times a day, and I found the same to be the case where the presence of a tumor, in addition to other symptoms, had led to the diagnosis of malignant disease.

It is interesting to follow the vicissitudes of a drug, and to notice how its use extends or diminishes until at last it finds its right place and maintains it. Thus digitalis, while mentioned in the London *Pharmacopœia* of 1721, was excluded from that of 1746. It again appeared in 1788, and since then it has held its place. Possibly codeine, after falling into almost complete disuse as an analgesic for many years, may again regain a more or less important place amongst the remedies which enable us to relieve pain.—*Brit. Med. Journal*, June 9, 1888.

Ligation of a Tonsil for Hemorrhage.

By Dr. E. W. Clarke, senior assistant surgeon at the New York Hospital.—Through the kindness of Dr. T. M. Markoe, attending surgeon, and Dr. Wm. Gordon, house surgeon, I report the following case of hemorrhage after amygdalotomy, with the method employed to check it:—A. M., aged 22, single, German, nurse, well nourished and robust, was received under Dr. Markoe's care on April 6, 1888, suffering from extensive hypertrophy of both tonsils. On April 11th a portion of both tonsils was removed with a volsella and angular scissors. The immediate hemorrhage was moderate and soon stopped. About an hour later I was called to the ward, Dr. Gordon not being in the hospital, and found the patient bleeding freely from the left tonsil, a large amount of blood having been lost already. Glycerite of tannin, a mucilaginous emulsion of turpentine, and styptic cotton were used in turn without any appreciable effect. Paquelin's actual cautery was next used. This served to check the oozing and bring into view a small bleeding artery in the middle of the cut surface of the tonsil. Several applications of the cautery directly to the bleeding point were made, but failed to affect the bleeding. Long clamps, with blades padded with cotton, one blade on the tonsil, the other outside on the cheek, also failed, as they could not be kept long in place on account of pain. By this time the patient had become very weak and pale, with the pulse rapid,

feeble, and soft, and it seemed to me that unless something radical were done immediately he would soon die from loss of blood; so, as he was very restless and nervous, ether was given, a gag introduced, and as much as possible of the bleeding tonsil seized with a volsella having large, bulging double points. The tongue was then drawn out of the way with a second smaller volsella, and a large silk ligature, with a double turn in the first knot, thrown loosely around the forceps on the tonsil. With the index fingers the knot was pushed down over the bulging hooks of the forceps on the tonsil, and thus easily around that portion of the tonsil included in them. When an attempt was made to tighten the ligature it slipped off, not having been well adjusted. A second and successful effort was made, with the difference that an assistant was employed to tighten the ligature while it was held about the tonsil with the index fingers as before. To make it more secure, a second turn about the included tonsil was taken, and a double knot tied on this. The long ends of the silk were carried out of the angle of the mouth and secured to the cheek by rubber plaster. The hemorrhage was now checked completely. The ligature came away on the fourth day with no recurrence of the hemorrhage, but a week later, when the patient was discharged to return to his duties, he was still very pale and somewhat weak.

Ligation of a tonsil stump might be done without anæsthesia, but only in special cases where the patient was intelligent and devoid of nervousness. Whether it could be done without assistance I doubt very much, and my success in the foregoing case was, to a considerable extent, due to the efficient assistance of Dr. Merrill, of the house staff of the hospital.—*N. Y. Medical Journal.*

Nephrotomy.—Mr. A. G. Miller (*Edinburgh Medical Journal*, June, 1888) reports three cases in which he performed this operation. His conclusions are as follows:

1. These three cases constitute my experience of "nephrotomy," taking that term to mean "an incision in the loin for abscess or cyst connected with the kidney." The first case,

that of J. M., was one of pyonephrosis following an injury. The second case, that of W. L., was one of perinephritic abscess, resulting possibly from exposure to cold, and becoming septic from contact with the colon. The third case, that of M. N., was one of tubercular disease, producing pyonephrosis. It is a curious coincidence that they all came under my care about the same time.

2. *The operation* I performed was the same in each case. An incision was made about midway between the last rib and the crest of the ilium, rather nearer the former, commencing at the outer margin of the erector spinæ, and passing outward and forward about four inches. This line of incision was gradually and carefully deepened till pus was reached. No difficulty whatever was experienced.

3. *Results of the Operation.* The patients were all greatly benefited for a period, the pain, inflammation, and bladder irritation disappearing almost at once. Yet in all of them a sinus formed in the loin, and persisted, from different causes, until death resulted from amyloid disease of the internal organs. The persistence of the sinus and its refusal to heal was due, in the first case, to sepsis, and the presence of the remains of a septic kidney acting as a foreign body; in the second case to imperfect drainage, on account of the peculiar shape and locality of the abscess sac, which could not contract aud fill in properly; in the third case, to the tubercular condition of the kidney.

I have recorded these cases because they all terminated fatally, and I wish thus to direct attention to the fact that the operation of nephrotomy for pyonephrosis or perinephritic abscess is not so successful as some would make it out to be. The patient is immediately benefited by the operation; but, as pointed out by Mr. Morris (Surgical Diseases of the Kidney, 1885, p. 525), "though benefited for the time, the patient may be worn out at length by suppuration or hectic."

Mr. Godlee has published several cases (*Practitioner*, October and November, 1887) in which ultimate recovery has taken place, though a sinus has continued to discharge for

several years. These, however, were mostly persons about thirty years of age, and therefore not so liable to suffer from albuminoid disease as my patients, who were eighteen, nineteen, twenty-two years respectively. On the other hand, cases have been published in the journals as *successful* who left hospital with a sinus in the loin. If these cases were watched and reported on again, we might find them ending fatally, like mine, especially if they were comparatively young. Two of my cases I might have published as successful a few months after operation.

I am unwilling to draw deductions from these cases, for the data are very few, and unfortunately *post-mortem* examinations were not obtained, so that confirmation of diagnosis, etc., is wanting. These cases, however, have left strong impressions on my mind, and I would like to give expression to them. Accordingly I would submit with considerable diffidence, the following suggestions:

1. *If a suppurating kidney is aseptic, leave it alone if you can.* The kidney may recover or may shrivel up and become a mass of cicatricial tissue. That the latter result is possible has been frequently perceived on the *post-mortem* table.

2. *If incision is necessary in an aseptic case, the utmost antiseptic precautions should be employed till the wound is soundly healed;* for septic infection may mean death, especially in the young.

3. *If the suppuration is septic, prefer nephrectomy to nephrotomy, provided the other kidney is sound.* Incision may be employed advantageously as a preliminary to excision. Such a procedure, according to Otis (*Boston Medical and Surgical Journal*, October, 1887), "robs a subsequent nephrectomy of much of its danger" (the mortality of the latter varying, according to his tables, from 31.48 per cent to 54.44 per cent).

Mr. Godlee (*loc. cit.*) also says that a contracted kidney is removed with less danger to life than a large one. "Hence the great advantage of draining such a kidney, and allowing it to shrink before taking it away."

At the conference held in Paris in 1886 (*Revue de Chirurgie*, November, 1886), the general opinion seemed to be in favor of nephrectomy, preceded by nephrotomy, being the best treatment for suppuration connected with the kidney.

Fracture of the Head of the Fibula from Muscular Contraction, IMPLICATING THE EXTERNAL POPLITEAL NERVE. By Robert F. Weir, M.D., surgeon to the New York Hospital.—I venture to bring to the notice of the society to-night a form of fracture which investigation has shown to be quite uncommon.

On the 5th of last May I was requested by Dr. C. C. Lee, of this city, to see a young gentleman, aged 21, who had fallen the night previously while wrestling with a companion. His left leg, he stated, was twisted around that of his antagonist. As he fell he felt something give way and found that he was unable to walk. He leg was carried decidedly to the inside of the thigh, so that the entire limb was bowed outward. He obtained relief from his pain by his friend pulling forcibly upon his foot, whereupon the knee straightened itself. The accident had occurred about twelve hours prior to my seeing him, and as at this time the knee joint was greatly swollen and painful, particularly over its outer aspect, where a good deal of ecchymosis was visible, ether was administered for a proper examination of the parts. The joint, as previously stated, was greatly distended with blood, but no fracture of the femur nor of the tibia was made out. Just above the joint, however, on the outer aspect of the external hamstring tendon, was felt a hard mass of the size of the end of the thumb, movable in several directions and apparently bony in character. Below this point was a depression, at the lower end of which, about one inch from the bony mass felt above, was the squared-off end of the fibula to be felt. This bone, on being measured from the external malleolus to this fractured edge, was found to be nearly an inch shorter than the bone of the uninjured leg. It was therefore evident that we had to deal with a tearing off of the upper portion of the fibula by the action of the biceps

muscle, which accident had also produced the probable dislocation and effusion of blood into the knee joint. No dislocation of the knee joint was, however, to be discovered at this examination, nor could it be reproduced by the manipulation, which was carried out in a careful and graduated manner. From the patient's description it was, however, undoubted that a moderate displacement had occurred. The limb was placed on a well-padded Volkmann's splint and cotton placed over the joint. Pressure was made upon the latter by the bandages used to secure the limb to the splint.

As this injury was to me a novel one, I occupied the time prior to my next visit in looking up in a hasty manner the literature of this subject and found but very scanty information upon such a lesion.

Nothing, for instance, is mentioned of this injury in Hamilton's work on "Fractures and Dislocation," nor in Malgaigne, nor in the recent work of Pick, nor, in fact, in any of the ordinary English works on surgery, except an allusion to it in Ashhurst's "International Cyclopædia of Surgery." But in the excellent work of Stimson on "Fractures" there is an account of this injury. In this latter work is a short summary of several such fractures, and its concomitant paralysis from injury of the external popliteal nerve is also mentioned. Nothing was found in the standard French surgical works, and in German only a brief statement in Koeing as to the existence of the injury and the possibility of its producing certain nerve symptoms, was met with.

My attention having been in this way directed by Stimson to the possibility of a nerve injury, the day after the etherization, a more critical examination of the limb was made and the nerve lesion confirmed.

I was assisted by the advice of Dr. E. C. Seguin and Dr. A. B. Sands, who kindly saw the patient with me and confirmed the diagnosis, as well as the treatment suturing the nerve, which I proposed. It was deemed advisable, however, to wait a few days until the tenderness of the knee joint had subsided, and thus avert the risk of inflammatory action, so easy to light

up in parts not yet recovered from the irritation of the injury, in accordance with the methods deemed most advisable in cases of recent patellar fractures.

Accordingly, on the tenth day after the injury, the patient was again etherized, and under antiseptic precautions, a curved incision some six inches in length, the center of which corresponded to the gap between the fractured bones, was made alongside of and down to the posterior edge of the tendon of the biceps muscle. On exposing this, the external popliteal nerve was recognized and traced downward to the separated capitulum of the fibula, and was subsequently dissected out from that point downward for nearly an inch below the lower end of the fractured fibula, where it divided in several branches. The trunk of the nerve was found not to be divided, but bearing just below the separated piece of the fibula marks of contusion, such as swelling and ecchymosis, and a moderate constriction, as if some of the fibres had been crushed in. The nerve was still attached to the small fragment, and below this point it was apparently stretched by the action of the biceps. It was therefore carefully separated from the loose piece of bone and freed in this way from the further effect of tension. The depth of the nerve injury was not ascertained. The fracture itself, when brought clearly into view, proved to be not as large as it was supposed through the skin, and consisted simply of the styloid process of the fibula torn off and drawn up about an inch and a half. The surface of the body of the fibula was smooth, and it was evident that the fracture had occurred at the epiphysal junction. A large amount of clotted and fluid blood was also met with, a good deal of which escaped from the wound. The lateral and posterior parts of the joint were seen to be open, but great care was taken not to disturb the clots which partly closed this rent. Two drainage tubes, one running down to the joint and one anterior to it, were placed in the wound, the edges of which were closed and antiseptic dressings applied. The limb was again placed in the Volkmann splints.

Nothing special need be said regarding the progress of the case. No reaction occurred; the wound healed with two

dressings in ten days, the tubes being removed when the first dressing was changed.

It was not considered practicable, from the small size of the detached fragment, to undertake at the time of the operation the wiring of the two fragments of bone together, nor was any attempt made, by permanently and strongly flexing the limb, to approximate them. A temporary essay in this direction, previously made, moreover, had shown only a moderate gain. It was therefore considered that any further or persistent trials of this latter manœuvre would be more likely to endanger the integrity of the joint, and that it would be wiser surgery to consider the safety of this part rather than the doubtful gain that might be obtained to the fracture. Moreover, in Herrgott's cases, as well as in some others, it did not appear that any disability ensued to the limb from the pormanence of this separation.

At the end of two weeks from the operation a light plaster splint was applied, and the patient was allowed to get out of bed and go around on crutches. He left the city for his home at Newport at the end of six weeks, with the directions given to a competent nurse that galvanism and massage, subsequent to the removal of ths splint, should be carried out thoroughly. Within four months after the injury he was walking about, even dancing. He subsequently went to Colorado, and, according to advices received within the last month, the patient has been able to walk a distance of ten miles, though making an occasional complaint of not being able to do as much at times as other young men on account of his lameness. In one of his recent letters he states that he is very much better, but fears that he will always limp a little.—(*Read before the New York Surgical Society.*)

The Treatment of Sebaceous Tumors — Many people, the subjects of congenital sebaceous tumors and "wens," object to having them removed, on the score that the remedy is worse than the disease, and the after-consequences may be serious. The following is the method I have adopted

in such cases, and with marked success. With a cataract knife (Graefe's puncture the cyst, and gently squeeze out the contents; then introduce a small piece of nitrate of silver. On the following day, by means of a pair of forceps, the capsule of the cyst can be withdrawn, just like the shell of a bean, without any portion being left adherent. In no case has there ever been any return of the growth or any ill effects. The method, if tried, will be found to have many advantages, apart from its simplicity and thoroughness.—*Brit. Med. Jour.*

Treatment of Colds and Bronchitis — In the *Therapeutic Gazette*, Dr. H. C. Wood discusses in a leading article the treatment of colds and bronchitis. When the cold is a widespread general one, involving the whole body in a condition which he regards as a form of subacute rheumatism, with aching pains and general wretchedness, he advises a free jaborandi sweat, followed by a few full doses of quinine. This, he says, will often liberate the sufferer at once, especially if the sweats are aided by murcurial or other purgation. For coryza, he says bismuth and cocaine injections into the nose almost invariably bring relief, though a vigorous dry shampoo may effect the same result.

In bronchitis, he says, the so-called expectorant remedies are of course indicated. These he divides into three groups: First, the narcotic expectorants, which are to be employed to allay excessive cough and quiet nervous irritability; second, the sedative expectorants to be used in the first stages of a bronchitis, to facilitate secretion and expectoration; third, the stimulating expectorants, useful in the advanced stages of a bronchitis when expectoration has already become free.

The ordinary narcotics, such as morphine and hyoscyamus, and the advantages and difficulties attending their use, he thinks are well known. Chloroform, however, he regards as one of the most valuable remedies that we have for quieting cough. In nervous or hysterical men or women, often the best expectorant mixture is one composed of pure narcotics. A very good home-made mixture for this purpose is one containing:

Whiskey, paregoric, glycerine, of each f ʒ ij ; chloroform m xxx. M. Shake well before using, and take in teaspoonful doses *pro re nata.*

This mixture has, he says, enabled patients to secure many a night's rest, by keeping a little bottle of it, tightly corked, at the bedside, and sipping it when necessary.

With regard to the use of hydrocyanic acid as a sedative, he seems to think that its action is so fugacious as to be untrustworthy in ordinary safe doses ; while wild-cherry bark preparations he rejects as certainly useless.

The older depressing expectorants, he thinks, have little power, unless given in nauseating doses, and in their stead he has come to use very largely the citrate of potassium. Of the following prescription, he says that he thinks any one who will use it will never give it up, unless some remedy of greater power be discovered :

℞ Potass. Citr. - - - ʒj
Succi Limonis - - f ʒ iss
Syr. Ipecac - - - f ʒ ss
Tr. Opii Cam. - - f ʒ iij
Sprup, q.s. ad - - - f ʒ iij

M. Sig.—Dessertspoonful every two hours.

This dose is for robust men and must be varied according to the strength and peculiarities of the individual patient.

Of the older stimulating expectorants the only ones in which he still places confidence are the muriate of ammonium and syrup of garlic. When the citrate of potassium mixture fails, he habitually resorts to the muriate of ammonium, and has often seen very good results from its use. It may be given in capsules if the stomach is very sensitive, each capsule to be followed by a drink of water. The following furnishes the best disguise for the taste of the drug that he has been able to concoct :

℞ Ammonii Chloridi, } āā - ʒ iss
Ext. Glycyrrhizæ, }
Glycerini - - - - - f ʒ ss
Mucil. Acaciæ - - - - f ʒ ij
Syrupi, Aquæ, q.s. ad - f ʒ iij

M. Sig.—Dessertspoonful every two hours.

Syrup of garlic is so disagreeable to most patients that it is very rarely used. In his own practice, in ordinary cases, the only stimulant expectorants used besides muriate of ammonium, are oil of eucalyptus, terebene, and oil of sandalwood, and occasionally oil of cubebs or copaiba. The doses of these remedies are so small, he says, and the taste of most of them so disagreeable, that they should always be administered in capsules. The oil of eucalyptus he is inclined to regard as the most effecient. It may be administered in an ordinary cold or bronchitis so soon as free secretion has been obtained. Terebene is a little more stimulating than the oil of eucalyptus, and to be employed somewhat later in the disorder (dose five minims). The oil of sandalwood is about equivalent to terebene, while the oil of cubebs is employed still later in the disorder.—*Med. and Surg. Reporter.*

The Case of Sextuple Pregnancy.—It may be remembered that an extraordinary case of multiple pregnancy recently occurred at Castagnola, neor Lugano, in Switzerland. A woman, aged 36, wife of the local *sindaco*, was delivered on May 4 of six children—four boys and two girls—at a birth. They were born alive, though prematurely, but they all died in a few seconds. Their united weight was only three pounds thirteen ounces, and the length of their bodies, which were perfectly well formed, varied from eight and three-quarters to ten and a quarter inches. The case, which is said to beat all previous *authentic* records of human fecundity, is vouched for by Dr. Francesco Vassalli, of Lugano, who attended professionally on the occasion, assisted by Drs. Bianchi, Reali, and Solari, of the same place. Dr. Vassalli has reported the case in detail in the *Gazetta Medica Italiana-Lombardia* of June 2, and an abstract of his account may be interesting. It has been stated that the woman had previously borne seven children in two batches of four and three respectively, but this is inaccurate. She was married only two years ago to a widower, aged 41, who had ten children by his first wife. There were no twins among these, but it appears that he has

five cousins—brothers—each of whom is the father of twins. A sister of the patient has also borne twins on one occasion. The patient herself, in the first year of her marriage, had a boy, who is now fifteen months old and in perfect health; she suckled him for eleven months, when she became aware that she was again pregnant. The catamenia had reappeared in the seventh month of her nursing, and the last period began on December 4, and lasted six or seven days; conception must, therefore, have taken place in the early part of January. The patient suffered severely almost from the first from weakness of the legs and vomiting, and in the fourth month the abdomen was as large as it usually is at full term. On the morning of May 4 (being about the one hundred and fifteenth day of pregnancy), while doing some light out-door work, she felt a sudden desire to empty her bowels, and, on squatting down for the purpose, there was a gush of hot liquid from the vagina, which she recognized as amniotic fluid. She immediately went home, walking with much difficulty, on account of something which she felt protruding from the vulva. A neighbor was called in, who found a tiny fœtus hanging by the foot, which was speedily delivered. All this occurred within a few minutes. Dr. Vassalli was then summoned, and found the os only partially dilated, while an unruptured sac could be felt through it. There being no urgent symptoms, the patient was kept quiet, and, after passing a fairly good night, she got up the next morning to attend to her household duties, feeling quite well. Towards mid-day pains came on with increasing violence, and she lost a good deal of blood. Seeing that abortion was inevitable, Dr. Vassalli thought it advisable to hasten delivery. He therefore punctured the membranes, and extracted a small fœtus by the foot. After tying the cord, he followed up the placental end with his right hand, till he came to another sac of fluid; this he also punctured, and delivered a third fœtus. Two more were extracted in the same way, the whole procedure occupying two hours. Fresh hemorrhage now occurred, and the uterus did not contract. Dr. Vassalli, therefore, tied all the cords together, and made gentle traction, at the same time ap-

plying pressure to the womb. This failing, he introduced his hand into the uterus, and tried to bring away the placenta, which, however, he only succeeded in tearing, with the result of making the bleeding more alarming. Having no hæmostatics at hand, he sent for assistance, keeping his hand in the uterus meanwhile as a plug. It was four hours before help arrived; the after-birth was then got away with some difficulty, a sixth fœtus enveloped in its own membranes being found attached to it. The patient bore the trying ordeal very well, and made a good recovery. The heads of the fœtuses were rather large relatively to the bodies, and the eyes were covered with the pupillary membrane. The genital organs were completely differentiated. There was only one placenta. The specimen has been placed in the museum of the R. Scuola Ostetrica, at Milan. Dr. Vassalli calls attention to the curious fact that Castagnola is rather remarkable for multiple births. From the official registers it appears that in a population of five hundred and eighty-five, from January 1, 1876, to May 10, 1888—that is, thirteen years and four months—there was a total of two hundred and forty-seven births. Of these, two hundred and twenty-eight were single and nineteen multiple, the latter consisting of five cases of twins, one of triplets, and the present one of *sextuplets*. The proportion of twin births, therefore, was one in forty-five, instead of Schröder's estimate of one in eighty-nine; and of triplets one in two hundred and twenty-eight, instead of one in seven thousand nine hundred and ten. —*Brit. Med. Journ.*, June 9, 1888.

Dangers of Antiseptics.—According to the Berlin correspondent of the *British Medical Journal*, May 19, 1888, at the last meeting of the Berliner Medicinische Gesellschaft, Dr. Emil Senger read a paper on the influence of antiseptic remedies on the organs of the body, with special reference to operations on the kidney. It is well known that after nephrectomy, or even nephrotomy, many patients die with symptoms of uræmia or anuria, even when it had been ascertained beforehand by careful examination that the other

kidney was quite healthy and capable of secreting the necessary amount of urea. Dr. James Israel, chief surgeon of the Berlin Jewish Hospital, has propounded a very complicated theory as to certain nervous sympathies between the two kidneys, whereby an operation on one may give rise to degeneration of the other. Senger has now proved by experiments on rabbits and dogs that our antiseptic remedies are the cause of these complications. He injected into the animals, when in perfect health, one-tenth or twelfth part of the quantity of corrosive sublimate, carbolic acid, etc., which is sufficient to kill them. He then extirpated one kidney and examined it microscopically, with the result that in all cases he found glomerulonephritis. There was exudation between the glomerulus and the capsule, and the epithelium of the tubuli contorti was almost entirely destroyed. He found also fatty degeneration of the liver, the spleen, the heart-muscle, etc. The various antiseptic agents were found to be injurious in different degrees, corrosive sublimate being the most dangerous, then the others in the following order: iodoform, carbolic acid, salicylic acid, boric acid. Senger therefore recommends surgeons to avoid antiseptics in operations on the thorax and abdomen, and urges them to employ either sterilized water, after the manner of Mr. Lawson Tait, or a solution of salt. By bacteriological and pathological researches he proved: first, that this kills the streptococcus pyogenes aureus in twenty-eight minutes, and that the effect is independent of the degree of concentration, for a 5 per cent. solution is just as effectual as a 20 per cent.; secondly, he claims to have shown that chlorate of sodium does not in any way injure the organs, and that no dose is strong enough to kill any animal.

A Rapid and Simple Method of Reducing Dislocation of the Shoulder.—In all the methods ordinarily employed for the reduction of dislocations downward if the humerus is raised into the glenoid cavity, Dr. Abril inverts this proceeding: his plan is to fix the humerus and to make the glenoid cavity descend on to the head of the

humerus. He claims for his method that it is most simple, easily and quickly done, that chloroform is not necessary to obtain muscular relaxation, that the pain is trifling, and that no assistants are required. He makes the patient stand with a crutch in his axilla ; he then holds the hand of the affected side, making slight traction downward ; the patient is now to let himself down as if he was going to fall on his knees, and as he falls the head of the humerus glides into its normal position, and the patient is surprised to find himself cured.—*The London Medical Record.*

American Medical Students — Flint's Classification.—Perhaps no man in America has come into closer relations with a greater number of medical students than Dr. Austin Flint, Jr. In the College and Clinical Record he gives the following classification of these as he has found them :—

1. Good students, forming twenty-five per cent. of the graduates and being marked eighty or more. These exert an enormous influence over the general opinion of the class. They practically keep themselves away from other students and have nothing in common with poor students. Their habits are envariably good ; they are present at all the prescribed exercises ; they dissect together, and usually collect in the same boarding houses, and form little clubs among themselves for quizzing and mutual improvement. When one is forced to miss a day his fellow students aid him in filling up the gap. Their amusements during the season are few and the amount of work they perform is enormous. Their verdict upon the ability and efficiency of their teachers is accepted by the class as final. They usually take under their protection certain of their juniors, who assume their position in the class when they have been graduated. The " good students " pass their collegiate life in an atmosphere of medicine. Medicine is the only subject which occupies their thoughts and conversation. Generosity of students of this class to each other is almost invariable. This class of students come from every part of the country. These students compare favorably with the graduates of any country.

2. The average medical student constitutes forty-five per cent. of the total graduated, and in marks ranges from below eighty to above seventy-five per cent. He is about the same the world over. The reasons why he does not become a good student are many and varied. Many are sadly deficient in mental training, even if their preliminary education be up to the standard. Many do not know how to study. Many are careless and have no fixed purpose, no enthusiasm, no capacity for consecutive mental effort. Some are bright, quick and apt, but indolent. They may be crammed for their examinations and thus escape the class of poor students, but their knowledge is superficial and indefinite.

3. Poor students form thirty per cent. of the graduates and receive less than seventy per cent. They are poor creatures indeed. Those who are a little above the unfortunate candidates who fail in their examination seldom do any credit to themselves or to the professoin.—*American Lancet.*

The Value of the Bacillus Tuberculosis.—Dr. Percy Kydd and Dr. Taylor have lately made known the results of a prolonged investigation as to the value of the tubercle bacillus in diagnosis and prognosis. In regard to the former, in many cases where the physical signs were undeveloped or were masked by emphysema or bronchitis, the discovery of the bacilli in the sputa was of great aid in diagnosis, and also in some cases of rapid wasting without any physical signs in the chest. They pointed out that it was a distinct advantage to be enabled to give a definite diagnosis early instead of waiting for physical signs to develop. In reference to prognosis, they did not lay much stress upon the bacilli; they had not found that a large number necessarily indicated a rapidly increasing disease or a small number a chronic or actually stationary condition, and in this they were supported by most of the speakers, though one gentleman was in favor of having the sputa sent up to him every week in order that he might arrive at a prognosis from the number of the bacilli, and he even thought that a prognosis might be given though the patient had never been seen.—*London Cor. to N. Y. Medical Journal.*

Antipyrine Laudamus!—The laudation of antipyrine in the literature of medicine has gone far beyond its merits, and we must remind the over zealous and unrestrainedly enthusiastic Dujardin Beaumetz that he has gone a little too far with his praises of the drug for the welfare of our patients or the truth of therapeutics. Antipyrine is neither the always indicated antifebrile, anti-pain or acute convulsive remedy it is claimed by its zealous votaries to be, and the *Alienist* must sound the same note of warning to such therapeutists in neurology as may have a little faith in its sayings, as it sounded some time back in regard to the much and over-lauded cocaine.

Antipyrine will not relieve the pains of locomotor ataxia. Antipyrine will not materially modify epilepsia or other convulsive disease for any considerable length of time. Antipyrine will not cure persistent cephalalgia, though it will sometimes, but by far not in the majority of cases, relieve migraine.

But it will arrest renal secretion, and its danger in fevers is thereby to be considered.

It is a good remedy in carefully selected forms of insomnia, but it will promptly kill in insomnia associated with double pneumonia, and it is alike dangerous in insomnia associated with renal failure.

It is a good remedy in polyuria if your sole aim is to stop the action of the kidneys. It ought not to be given in cardiac angina with organic disease, in pulmonary or renal congestion.

It ought not to be given often to the same patient during the same day. Our conviction, from careful observation of its unsatisfactory sequences, both where convalescence has resulted and where death has ensued after its use, is against its often employment where organic embarrassment of either heart, lungs or kidneys complicates the symptoms calling for its anodyne or antipyretic powers.

It is a remedy for exceptional rather than general use, Mons Dujardin Beaumetz to the contrary notwithstanding. The following is in brief the record of its untoward effects in the two last cases in which we employed this drug.

A. E. M. was a young and temperate book-keeper, who

after being stricken with pneumonia became insane. His physician, who was a homœopath, regarded him as convalescent, but we found on auscultation, unresolved hepatization of the left lung and fresh crepitus and bronchial râles throughout the right lung. The heart's movements were also embarrassed from endocardial and pericardial inflammatory changes in sac and valves. The patient had in his delirium during the day before got out of bed, gone down stairs on a damp cold day in his night-clothes and caught fresh cold. He had been for several days and nights sleepless and suffering pain, and antipyrine was decided on to fill the double indication. Two fifteen-grain doses secured sleep during the entire night, but the next day the patient's face was livid and breathing markedly embarrassed. He died the day after.

Another patient of thirty-eight years, a married lady of gouty, rheumatic diathesis and a history of many attacks of rheumatism and neuralgia and neuritis, the original attack beginning in the great toe, suffering from intercostal neuritis and insomnia, was given fifteen-grain doses twice during the day and once at night. Under these the heart's beat became intermittent, fell to below forty in a minute and required ammoniacal stimulants, digitalis and Mariani wine, and thirty-six hours in the recumbent position, with strong beef-tea and digested nutrients, before the heart regained its regular rhythm.

We might write a book on antipyrine, and its conclusions from our clinical experience would be, employ with caution and not often. Repeated doses in embarrassed states of lung, heart or kidneys are hazardous.—*Alienist and Neurologist.*

THE

Montreal Medical Journal.

VOL. XVII. AUGUST, 1888. No. 2.

THE NEW JOURNAL.

Being in possession of the first number of the MONTREAL MEDICAL JOURNAL, our readers are now in a position to pass judgment on our latest venture. The verdict, we sincerely trust, will be "not guilty." It will be noticed that besides the change in title, the reading space of the JOURNAL has been enlarged by sixteen pages. When the original *Canada Medical and Surgical Journal* was established in 1871 by our esteemed colleague, Dr. G. E. Fenwick, it was considered fully ample to meet the requirements of the time, but during the past decade the increase in the amount and variety of medical literature has been so rapid and so vast (owing mainly to the marvellous development of the various specialties) that the addition of so many pages became an absolute necessity. We shall doubtless find that our capacity, increased now altogether by thirty-two pages, will soon be fully tested. The change in title may probably be considered ill-judged by some of our older and more conservative readers, but it was made with the double object of shortening the name, but more particularly with a view to having the JOURNAL identified with the city in which it is published. We would particularly draw attention to the remarkable fact that notwithstanding the increase in size of the JOURNAL, and the consequent addition of reading matter, the price has been reduced from three dollars to two dollars per annum. May we not naturally expect a large influx of new subscribers?

CASCARA SAGRADA IN RHEUMATISM.

This drug, which hitherto has been known to the profession as a mild laxative only, has, during the past few weeks, been accidentally found to possess apparently remarkable anti-rheumatic properties. Dr. H. T. Goodwin, of the United States Marine Hospital service, was himself attacked with severe rheumatic pains in the shoulder, and being in need of a laxative, took some cascara. In less than two days the pains had disappeared. Thinking that the sudden subsidence of the attack might have been due to the drug, he determined on trying to verify his suspicions by administering it to some cases of rheumatism in the hospital under his care, and, as he expressed it, "the result astonished me; within twenty-four hours there was marked improvement in every case." In some thirty cases, with three or four exceptions, where there was a distinctly syphilitic taint, he obtained the most satisfactory results. He gives the drug in fifteen drop doses thrice daily, either alone or combined with the syrup of glycerine. Where both it and the salicylate of soda failed, a good result was obtained by combining the two in the usual doses. Dr. Goodwin makes no attempt to explain the action of the drug in relieving rheumatism, leaving that to other observers, of whom, we trust, there will be many in the immediate future.

QUACKERY IN THE RELIGIOUS PRESS.

The following resolutions were unanimously adopted at a recent meeting of the State Medical Society of Arkansas. We congratulate this comparatively obscure society on its pluck and enterprise. Many a more pretentious body has discussed this subject, but never before to our knowledge has so vigorous a protest been entered against this well-known helpmate of charlatanism, namely, the so-called religious press. The following resolutions were passed at Little Rock, Arkansas, May 15, '88, and are signed by Z. P. Gibson, M.D., secretary, Arkansas State Medical Society:—

Resolved,—That the members of the State Medical Society

of Arkansas have for years observed with pain and mortification the patronage given to charlatanism in all its multifarious aspects by the religious press of our country.

Resolved, further and most specifically,—That the appearance in religious papers, ostensibly published for the inculcation of truth and morality, of serious homilies on prayer and praise side by side with cures for consumption, cancer, Bright's disease and other incurable ailments to which an editorial endorsement is often given, as well as secret preparations under the cloak of remedies for disease, but really intended for purposes of fœticide and other immoral uses, largely tends to shake the confidence of the profession of medicine in the integrity and purpose of the managers and editors of such journals.

Resolved, further,—That it has been the well-known custom of the profession to render services gratuitously to clergymen, which we do not regret nor do we propose to recall, yet we must assert that the frequent occurrences of endorsements and recommendations of the clergy, of peripatetic doctors, and advertising charlatans has in many instances been the only reward of our gratuitous services.

Resolved, further,—That, as a Society, we declare that the continued perpetration of the above offences by some of the clergy and religious press brings harm to the bodies of their constituency, and damages materially their influence upon the thinking class of the medical professsion.

CANADIAN MEDICAL ASSOCIATION.

Dr. James Bell, general secretary, has issued a circular card to the profession of the Dominion intimating that the annual meeting of the Association will be held in Ottawa on the 12th, 13th and 14th days of September next Those having papers to read are requested to send in their titles without delay.

The following papers have already been promised :—

(1) Face Presentations—Dr. H. M. Mackay, Woodstock, Ont.
(2) The Mortality of Pneumonia—Dr. Wm. Osler, Philadelphia.
(3) The Duty of the Medical Profession under the Public Health Act of Ontario—D. Wm. Canniff, Toronto.
(4) Some minute but important details in the Management of the Continuous Current in the Treatment of Fibroid and other Diseases of the Uterus—Dr. A. Lapthorn Smith, Montreal.
(5) A Case of Resilient Stricture of the Urethra Cured by Electricity —Dr. A. L. Smith, Montreal.

(6) The Treatment of Varicocele and Orchitis by the Electric Current of Tension—Dr. A. D. Smith, Montreal.

Papers have also been promised by Drs. Fenwick, Roddick, Shepherd, Alloway, Blackader and Bell, of Montreal.

THE WEIR MITCHELL SANATORIUM.—Dr. A. Holford Walker announces his intention of removing his establishment from Hamilton to Toronto, feeling no doubt that the larger city will afford superior advantages. Before beginning work in Toronto, however, it is Dr. Walker's intention to spend a few months abroad, with a view especially to studying the methods of the leading gynæcologists in Great Britain and on the continent. He will then be prepared to receive women requiring surgical treatment, as well as cases suitable for Dr. Weir Mitchell's Rest treatment. There is evidently ample room for an establishment of this kind in Ontario, and we sincerely wish Dr. Walker every success.

Personal.

Dr. N. D Gunne, medalist, McGill, '88, has settled in St. Thomas, Ont.

Dr. J. H. Thompson, McGill, '88, is apparently doing well at Fisher's Landing, New York State.

Dr. J. H. Kennedy, also a graduate of McGill of this year, is trying his luck at Guelph, Ont.

Dr. George Ross, our senior editor, left a few days since with a patient for the celebrated Banff Springs, in the Rocky Mountains.

Dr. James Stewart, also of our editorial staff, is visiting France, making a special study of nervous diseases. He is probably at present in Nancy.

Drs. Gardner, Wilkins, and Major are also in Europe variously engaged. The latter will probably visit some of the Russian hospitals before his return.

Surgeon-Major Keefer, Bengal Army (McGill, '69), passed through a few days ago on his way from India via Vancouver. He goes to London to report himself previous to retiring from the service.

Our old friend, Dr. Egerton Y. Davis, paid us a flying visit last week. He is at present engaged in looking up material for his new work on "Sexual Peculiarities." Before returning to Pentonville it is his intention to revisit the Great Slave Lake in order to study further the remarkable customs of certain Indian tribes frequenting that region.

Dr. McClure, late medical superintendent of the Montreal General Hospital, is about leaving for Northern China as a medical missionary under the auspices of the Presbyterian Church. We congratulate the doctor on the philanthropic and self-sacrificing spirit which he has recently displayed, and wish him *bon voyage*. We sincerely trust, however, that his valuable services may be fully appreciated by the "Heathen Chinee." Otherwise his visit may be made most unpleasant, because we understand the Chinese are not all vegetarians.

Medical Items.

PRESCRIPTION FOR HEADACHE.—Dujardin-Beaumetz recommends the following: ℞ Caffeine, gr. iv; salicylate of sodium, gr. iv; hydrochlorate of cocaine, gr. iss; water, f ʒ ij; syrup, f ʒ vss. M. Take the whole at one dose at the beginning of the attack.

SALICYLIC ACID IN RINGWORM.—Dr. N. F. Penn, of Lexington, Ky., recommends a saturated solution of salicylic acid in collodium as a cure for ringworm. The solution is painted on to the affected portion of skin once every day, and generally one application is sufficient. It causes some pain, but only for a short time.—*N. Y. Medical Journal.*

LOOK BEFORE YOU LEAP.—The University of Heidelberg recently conferred the degree of M D. on Carl Umbach, who had written a brilliant dissertation on "The Influence of Antipyrine on Nitrogenous Secretions." And now Umbach turns out to be a quack, and the authorities of the famous university are smoking their pipes in gloomy silence.

THE RABBIT EYE OPERATION.—Encouraging reports are given, says the *Philadelphia Times*, by Dr. L. Webster Fox upon the eye of Mrs. Martha Schick. Right eye central vision increased to counting fingers to four feet, able to go about alone,

color perception keen. The cornea surrounding the graft has recently began to clear. The sight of the left eye, which was nearly blind from sympathy, is restored to its normal condition.

M. CHARCOT AND THE EMPEROR OF BRAZIL.—Sometimes, says our Paris correspondent, doctors are properly paid for their services, as witness the case of Prof. Charcot, who was called over to Milan to see the Emperor of Brazil. It was a two days' service. Milan is twenty-four hours from here, and Dr. Charcot was paid 40,000 francs—say $8,000 ; $2,000 a visit is not bad, even for a Charcot.—*N. Y. Med. Journal.*

A FORMULA FOR CATARRH OF THE THROAT.—Dr. Endler, in the *Deutsche Med. Wochensch.*, February 22, 1888, highly recommends the following gargle in cases of catarrh of the pharynx or larynx. It is by no means unpleasant to the patient, and its use is accompanied by very satisfactory results :

℞ Sulph. Zinc. - - - 75 gr.
Aqu. Menth. Piper. - 2 pints

S.—Use as gargle three or four times daily.

RESORCIN IN CHRONIC ECZEMA.—A favorable report is made (*Therapeutic Gazette*, June, '88) by M. Schmitz of the treatment of two obstinate cases of chronic eczema by means of applications of resorcin. The remedy was employed as a solution in glycerine—a half ounce of the former to four ounces of the latter. The patients were young children, the disease chronic, and more or less general. The affected parts were painted twice daily with the above solution, improvement thereafter being steady and continuous.

A CASE OF MISSED LABOR.—Goth reports (*Archix für Gynakologie*, Bd. xxxii, Heft 2) the case of a primipara in whom fœtal life was destroyed by a fall at eight months pregnancy. Labor did not come on, but necrosed fœtal tissue and pus were discharged, and the patient contracted septicæmia. Efforts to remove the fœtal remnants failed ; twenty months after labor should have occurred a vagino-rectal fistula formed, with discharge of necrosed tissue. Two years after conception, under deep narcosis, the cervix was split, impacted fœtal bones were

removed, and the uterus was emptied and disinfected, recovery followed. From the literature consulted, Goth adduces multiple intra-mural fibromata and disease of the endometrium as causes for missed labor.

Some Wonders of Advertising.—The extensive manner in which art is employed by modern advertisers may be judged by the fact that a certain printing firm during the month of January booked the following orders: For Pears' Soap, one million chromos of the "Dirty Boy" and the same of "Mary Anderson;" for Mother Seigel's Syrup, fifteen million chromo covers, and one million chromo box-tops; for Warner's Safe Cure, eight million chromo covers and eighty thousand show-cards; for Howell's Golden Herb Pills, one million and a half of chromo handbills; for Thorley's Food, four hundred thousand chromo covers and two-page pictures for an almanac; Kearley & Tongue require eighty thousand calendars for 1889.

Mucous Membrane Grafts.—Wölfler (*Deutsch. Gesellsch. für Chirurg.*, xvii Kongress) reports some cases of mucous membrane transplantation which were as successful in sequel as Thiersch's more widely known transplantings of the epidermis. The mucous membrane was cut into thin strips of an inch to an inch and a half long and of a third of an inch broad. That taken from young persons grew best. The wound should be three or four days old. In three cases of impermeable urethral stricture, the cicatricial tissues, together with the urethra, were excised. After three days the continuity of the urethra was restored by transplanted flaps of mucous membrane, and a catheter was left in the bladder to act as a mould for the new canal. The results were highly satisfactory. In other parts of the body the procedure was equally successful.

Women and Obscene Literature.—A certain class of very good and well-meaning folk never tire of declaiming from the platform of the corrupt and licentious conduct of men, but from a recent discussion in Parliament respecting the rapid spread of corrupt literature in this country, it would appear that the male sex are not alone to blame in this matter. In-

deed, were the corrupt literature business to depend on the patronage of men alone it would die a natural death. The chief customers of the vile traders in obscene publications and indecent prints and photographs are said to be women. In some parts of London there are reading-rooms and lending libraries open to females only, where young girls can have the use of private rooms, and a supply of indecent books and prints at a small charge. This is a matter which might well engage the attention of the Social Purity Association.—*London Hospital Gazette.*

—A number of ladies are said to have formed themselves into a "Society for Nursing Sick Bachelors in their Lodgings." The object of this society is to rescue celibate men from the tender care of landladies and charwomen, and while enabling them to "lie by" in their apartments, provide them at the same time with skilful nursing.

THE TREATMENT OF CARBUNCLES AND BOILS.—According to Eade (*Lancet*, May 19, 1888), carbuncles can be cut short at almost any stage of their course. When they begin as pimples, continuous soaking with a solution of a mild antiseptic, such as boric acid or salicylic acid, will almost certainly destroy them. At a little later period they may be aborted by thrusting freely into their central or cribriform opening a strong solution of carbolic acid in water or glycerin. When they become large and solid they must be partially or entirely excised or incised, and the boggy material scraped away. If surgical proceedings are refused, the continuous application of carbolic solutions in oil or glycerin, with or without poulticing, will do much to improve their condition. Boils may be treated on the same principle, but the heroic surgical procedure is not necessary.

THE TRIBULATION OF A MESMERIST.—The *Buffalo Sunday Morning News* gives an account of a mishap that is said to have overtaken a mesmerist lately. He was traveling about the country, giving public exhibitions in mesmerism, and, while in Sault Ste. Marie, was asked to show his powers at an even-

ing party to which he was invited. Among the persons whom he succeeded in mesmerizing was a young women who is said to have come under the mesmeric influence very readily. Unfortunately, however, the exhibitionist found himself unable to dispel the mesmeric state in her case, do what he might. She insisted on following him about whithersoever he went. Medical men were called in, but nothing was of any avail. The man was advised, and indeed it seems to have been his own conviction, that he ought to make the only reparation possible, that of marrying the girl. This, accordingly, he is said to have done, although he was already under engagement to another woman. Whatever may be thought of the alleged facts in this case, there can be no question regarding the propriety of forbidding exhibitions of the sort, as has already been urged in Paris and elsewhere.

—The Indiana State Medical Society carries off the honors this year among successful annual meetings. We are not quite so certain about its scientific work, but the social features, and especially the banquet given by the Marion County Society, showed that our Hoosier friends possess wit, poetry, and oratorical powers of a superior order. There were two good poems, many bright speeches, a kind of spook-letter from the long-dead Daniel Drake, and a telegram from Bill Nye, as follows :

"Sorry I cannot be there. May you and associates continue to take life easily, as heretofore.

"BILL NYE."

This was received with great applause, which commenced as a murmur and increased to a roar.—*Medical Record.*

MR. LAWSON TAIT ON ONANISM.— Mr. Lawson Tait recently contributed an article to a French contemporary on the subject of onanism, which is by no means uninteresting reading. He attributes its ravages largely to the horror-stricken silence with which the discovery of its existence is greeted, and appears to regret that it is not made the subject of conversation, if only to express one's detestation of so vile a habit. He would treat it as a contagious disease ; and in girls, is disposed

to advocate clitoridectomy (for doing which the late Dr. Baker Brown was crucified, in a professional sense). He doubtless feels strong enough to stem the torrent of abuse under which his predecessor sank. As a contemporary observes, however, if he conscientiously carries out his treatment in addition to that for which he is already famous, maidens of the future, *sans* clitoris, *sans* ovaries, and even *sans* uterus, will be able to confront the most fearful temptations without any fear of succumbing.—*Hospital Gazette.*

—Some gynæcological methods of the present day are startling. Removing ovaries may be more sensational, but how are we to know that it is a more effectual procedure than that our ancestors practised, for they, too, had their speculum men, and they were not to be despised. For example, after a couple of centuries, have we a better method of relieving the fallen womb and restoring it to rectitude of life than that advocated by Zacutus "by tying a mouse to the thigh unknown, and so by the fright the womb went up," or the procedure of Roder, "by making as if he would have applied a hot iron to it, which prevailed," or of a still more heroic plan, that of Barbet, "that five or six smart blows on the bare buttocks with a strong hand may reduce it, it being first anointed *cum Ol Ros cum Myrtin.* Yet I do fear not so sure, as it may cause smart, sorrow, or laughter in bystanders." Gynæcologists, attention!! There is something in it.

—Peripateticus says: I should like to relate a little anecdote showing the danger of indulging in too copious libations of cold water, though I should not wish them to be construed as adverse to general temperance principles. Twelve workmen in an artificial manure manufactory in France died "all of a heap" of pneumonia, supposed to have been caused by breathing the filthy dust of their products. On enquiry, however, it transpired that the men were addicted to copious libations of cold water from the refrigerator when sweating profusely in consequence of their exertions. I don't think I ever saw a Frenchman really sweat at work, but, anyhow, these men did so, and

drank and died. Had they partaken of beer or other vile alcoholic compound, it is quite possible they might have survived. There is no moral to this story.—*Hospital Gazette.*

A Tapeworm Episode.—In a chapter of his most entertaining *Souvenirs d'Algerie*, Dr. Badour, whom we have quoted before in the *Journal*, says of the universality of tapeworm: "In Algeria, nobody is sure that his small intestines are not infested by the parasite. That is, to put it mildly, saying that it is very common, and that in spite of the fact that pork is used less there than anywhere else, and scarcely any rare meat is ever eaten. The fact is that every blade of grass is infested with ova, the earth and the air being filled with them by the shameless filth of the Arabs. These deposit their excrement and waste of all descriptions upon the soil and thus fructify it. There is no such thing as sewage. Next to man himself the dog is the great agent for scattering the tænigenous scolex. The liver of every rabbit is stuffed with them. You can easily see the risk that one runs, even when most careful, in a country where vermin are more plentiful than small change. Once upon a time, as the story-books say, a certain lady friend of mine was delivered of seven metres (about eight yards) of tænia. Three days afterwards, disquieted by borborigmi which she could not repress, and other symptoms, she took a dose of medicine which I had given her and instructed her how to use; and very soon afterward passed quite as much more. There was a large bowlful of it—a sight to forever disgust one with noodles! At another time four tæniæ came out together (as I had ocular and manual evidence, having personally "assisted") coiled around each other in an uniform rope! The patient had had reason to suspect that he was harboring an unwelcome guest and took male fern. The result was marvellously comical. I was in bed, sleeping the sleep of the just, when I heard footsteps hastening to my door and a cry 'Quick! quick! ——— is dying!' I ran to the patient, and what do you suppose I saw? He was standing up, holding on to the bed, and his wife, squat on the floor, was gripping a huge cord which issued from

his anus, and many metres of which were coiled on the floor! Pale and frightened, she told how she had commenced to pull on it, but finally had ceased, believing that she was pulling out his intestines (*croyant à un détripaillement*, literally 'believing that it was a *detriping*')! She was fooled: it was a rouleau of four tænia which finally came out, heads and all. I took them forthwith to the military hospital, and showed them, as they were, to the entire *personnel*, who will substantiate the story!"

[The doctor's story is a tough one, and reminds the writer of a somewhat similar experience with a darkey in Arkansas some years ago. He brought to the office one day a jar wrapped in an old newspaper, and asked if I wanted to "buy a curasity?" On being asked what it was, he took off the wrapping and I saw the biggest coil of tapeworm that up to that moment I had ever beheld. "Hits all dar," said the darkey, "a monstrous big weyum, an' I fotch him out whole *dis* time. Tudder one bruk all-ter-pieces, kase, I reckon, I pull too hard. *Dis* time I jes let um crawl out *heself* a little way, den I dun tuck an' put a rock on de eend an' jist crawl off from him on all fo's. Gimme half a dollar an' call it squar!" We didn't trade, however. F.L.J.]—*St. Louis Med. and Surg. Journal.*

—A Wolverhampton correspondent of *The Times* states that during a heavy thunderstorm recently, a collier, named Bates, who had lost his sight through an accident, was being led home, when a flash of lightning was reflected on the spectacles he was wearing to conceal his disfigurement. After a peal of thunder which followed he complained of pain in his head. The next moment, to his surprise, he found that he had regained possession of his eyesight. The occurrence has caused considerable excitement in the locality, as well it might, for such an instance is probably without parallel. It is to be hoped that the subject of this miraculous cure will be examined by an oculist, and that a full report of the case will be published.—*Hospital Gazette.*

Publisher's Department.

—After using *Tongaline* for several years in the treatment of neuralgia and neuralgic rheumatism, I am convinced that it is a meritorious compound and possesses curative properties superior to any other remedy.—*Thos. H. Craven, M.D., Canon City, Colo.*

The Treatment of Ulcers.—An article appeared in the *London Medical Record* for December 15, 1887, giving interesting details of the treatment of ulcers by phosphoric acid, as shown by the experience of Dr. Grossich. By his method of treatment, he used a ten per cent. solution of pure phosphoric acid in distilled water. The ulcer is covered with a bit of lint dipped in this solution, and the dressing renewed three or four times a day. The patient for the first few minutes feels a slight burning sensation, but this soon passes, and within twenty-four or thirty-six hours the ulcer cleans and looks better. Inflammation or eczema of the surrounding parts disappears, and all pruritus ceases. The ulcer cicatrizes rapidly, and the cicatrix is firm and healthy. Kollischer treated tubercular affections of the joints with injections of the phosphate of lime, with great success. Dr. Grossich has also had good results with this treatment, and cites some very interesting successful cases. The treatment by the solution of phosphoric acid was further employed in a case of tuberculous abscess of eight months' duration, and also a case of eczema marginatum which had lasted more than a year, and good results followed. The above suggests the superiority of Horsford's Acid Phosphate as a substitute for the phosphoric acid. The effective acidity of this preparation is about the same as the ten per cent. solution of phosphoric acid which is prescribed in the above treatment, and it may therefore be justifiably employed by the profession in the treatment of disorders of this character. It has the advantage of containing the phosphates in solution, notably the phosphate of lime. It follows, then, that all cases that require the phosphoric acid treatment can be more advantageously treated by Horsford's Acid Phosphate, and the suggestion is hereby commended to the profession.

THE

MONTREAL MEDICAL JOURNAL.

VOL. XVII. SEPTEMBER, 1888. No. 3.

Original Communications.

CICATRICIAL ECTROPION CURED BY TRANSPLANTATION OF SKIN BY THIERSCH'S METHOD.

BY F. BULLER, M.D.,
Professor of Ophthalmology, McGill University.

Walter C., aged 5, fell against a hot stove in February last, severely burning left side of face. Admitted into hospital June 19. A dense cicatrix occupies a large surface below left eye, drawing the lower eyelid directly downwards fully half an inch. The exposed conjunctiva is somewhat thickened and in a state of chronic inflammation. The great disfigurement caused by this condition is still further increased by large cicatrices on the outer part of cheek and on the left temple, and it would be difficult to obtain a flap of healthy skin from the vicinity to restore the everted eyelid. For this reason, and in order to avoid additional cicatrices, it was decided to adopt the Thiersch method of transplantation. The patient being placed under ether, the face and right thigh were thoroughly washed and then cleansed with solution of perchloride of mercury 1 in 2000. The edges of both upper and lower lids were pared at two corresponding points and an incision through the partially cicatrized skin was made parallel with the edge of the lower eyelid, about 3 mm. from its border. The dissection was continued until the lower lid could readily be pushed into its proper place without traction on the cicatrical tissues below. This left a triangular raw surface extending the whole length of the

lower eyelid and about the same distance downward on the cheek. The lids were then united with two sutures. As soon as all bleeding had ceased a thin piece of skin about quarter of an inch wide was removed with a razor from the front of the right thigh and carefully spread over the upper part of the raw surface, covering its whole length at this part; two similar pieces, but shorter, completely covered the remainder of the raw surface. These again were covered over with short strips of antiseptic isinglass plaster, finally absorbent cotton sprinkled with iodoform was placed over all and retained with another bandage. At the end of forty-eight hours the dressings were removed. All the transplanted skin was found firmly adherent, of a healthy pink color, and free from moisture or discoloration at any part; it had, in fact, united throughout "by first intention." The iodoform dressing was reapplied for a few days as a precautionary measure, but at the end of a week all dressings were discontinued, the lower lid, still united to the upper by two firm bands of adhesion, presented in all other respects an almost normal appearance. It is intended that the edges of the lids be allowed to remain united for a few months, after which all danger of retraction of the renovated lid will have ceased, and the two bands of adhesion can be safely divided.

The writer believes that this method of skin grafting will prove of inestimable advantage in many blepharoplastic operations. In another case recently treated an extensive burn of both lids was grafted during the granulation stage by the same method, but a free mucopurulent secretion from the conjunctiva destroyed some of the grafts. Those that succeeded, however, greatly facilitated the healing process and obviated the cicatricial contraction to a considerable extent.

QUARTERLY RETROSPECT OF SURGERY.

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Transplantation of Nerve from Rabbit to Man.—Dr. Gersung of Vienna, assistant to Prof. Billroth, has recently performed a novel and interesting operation (*Brit. Med. Journal*, May 19, 1888), viz., the transplantation of nerve from the rabbit to man. The patient was Prof. von Fleischl, who occupies the chair of Physiology in the Vienna University. Sixteen years ago he accidentally wounded himself while performing a post-mortem examination, and severe inflammation of the whole right upper limb ensued. The terminal phalanx of the thumb became gangrenous, the stump left became painful, and later on reamputation was performed. This was followed by the formation of neuromata. For this condition the branches of the median nerve which supply the thumb were first resected, together with the terminal neuromata, and at a later period, when new neuromata began to develop, the central parts of the same nerves, together with the branches of the radial nerve which supply the thumb, were resected. Fresh neuromata now developed on the branches of the median nerve, which were treated without success by the injection of hyperosmic acid and electrolysis. Two years ago the neuromata were resected again, and the resection of the nerves was continued. The pain, however, recurred, and the suffering became so intense that the following operation was performed: On March 4th patient was put under the influence of chloroform, and the neuroma, which was situated behind the volar carpal ligament, was excised, the nerve being cut through behind the neuroma. The peripheral nerve stumps of the two digital branches were then sought for. A rabbit was now killed, and as long a piece as possible of the sciatic nerve of the animal with the two branches into which it divides was dissected from it. The sciatic nerve was afterwards inserted into the space between the central stump of the median nerve and its digital branches; the central end of the sciatic nerve was sutured to the connective issue which covered the median nerve, and the

two branches were sutured to the digital branches of the median nerve. The portion of nerve measuring about six centimetres which was deficient was thus made up. After the operation, severe pain persisted for some hours, but then entirely subsided. Healing took place by first intention. At the time of writing two months had elapsed since the operation and the pain had not returned; sensibility was being re-established in the part. The ultimate result of this operation will be anxiously awaited, as the result, if favorable, will have much influence in introducing and giving a widely extended trial to an operation which promises to relieve a very painful affection.

Acro-megaly.—At a meeting of the Clinical Society of London, held April 13th, Mr. Rickman Godlee reported a case of the above affection. This affection was first noticed by Marie (*Revue de Médicine*, April, 1886), although Dr. Hadden and Mr. Ballance had previously published a case in Vol. XVIII of the Society's Transactions, 1885. The disease is named from the enlargement of the hands and feet, but the bones of the face also become hypertrophied. The long bones are usually unattacked. Mr. Godlee's patient was a lady, aged 41, who had applied to him on account of a great enlargement of the thyroid of about nine years' duration. The cyst was opened and drained. The patient, who had previously been of a slight figure and the possessor of a good voice, first noticed the disappearance of her high notes, then the swelling of the neck, and then the sudden stoppage of her menses at the age of thirty-six. Since that time there had occurred a gradual increase of the thyroid, accompanied by enlargement of the bones of the face and limbs, and especially of the lower jaw and hands and feet. Her present condition was as follows: Bones—Lower jaw much enlarged, so that the teeth, which spread out, could not adapt themselves to those of the upper jaw; the face has the shape of an egg with large end downwards; clavicle and ends of ribs massive, and sternum appears as if sunk down between them. All natural prominences of long bones much exaggerated, and the small bones of the hands and feet much enlarged, so that the extremities had become broad and spade-like. Marked

kyphosis of spine, causing considerable diminution in height. Cartilages of ears thick and stiff. Skin coarse, with large sebaceous glands in face. Muscles much wasted. Smell much impaired, but hearing normal. Vision good, and touch normal. Voice harsh, metallic and monotonous. In a condition of marked and increasing weakness, poor appetite, and excessive thirst. Pulse rapid; temperature normal. Intelligence perfect, and disposition placid. Mr. Godlee referred to (1) the connection between this remarkable condition of the bones and the abnormal thyroid noted in most cases, comparing it with cases of serous malignant tumors of the thyroid, which have a tendency to recur in bones; (2) the relation between the abnormal thyroid and the early stoppage of the catamenia, also apparently a common symptom of the disease; (3) the resemblances and differences between acromegaly and osteitis deformans; (4) the superficial resemblance, but wide difference, between acromegaly and myxœdema.

At the same meeting Dr. Hadden and Mr. Ballance brought forward a case which had been reported three years before; the case was now of five years duration, and was that of a woman aged 37. It followed a rheumatic swelling of the knees following scarlet fever. Her menses ceased and never returned; the face enlarged, also clavicle, hands and feet. The enlargement was general. The cranium was not affected, and the thyroid was distinctly atrophied. The tongue was hypertrophied. Attention was called to the chief points of difference between this disease, myxœdema, and osteitis deformans.

Dr. Wilks also reported a case of the disease in a young woman aged 28. She had been good-looking, but had become so hideous that the boys shouted after her on the streets; her features had become thickened and deformed, and her hands and feet large and ungainly. The malady had lasted six years and there was amenorrhœa. She had lost the sight of both eyes. She finally died comatose, and his belief was that there was a tumor of the brain.

Dr. Godlee stated that in three cases of this disease there was found post-mortem some enlargement of the pituitary body.

Erb's paper collected eleven cases of the disease, and with the two now reported, brought the number up to thirteen occurring between the ages of 15 and 50. It occurs in both sexes. The first case reported occurred in a woman aged 58; the disease came on at the menopause. In some cases the lower jaw was not enlarged, and in others the long bones were distinctly enlarged.

The Influence of Antisepsis on the Kidneys.—At a recent meeting of the Berliner Medicinische Gesellschaft, Dr. Emil Senger read a paper on the above subject. He said that it is well known that after nephrectomy, or even nephrotomy, many patients die with symptoms of uræmia or anæmia, even when it has been ascertained beforehand by careful examination that the other kidney was quite healthy and capable of secreting the necessary amount of urea. Senger has proved by experiments on rabbits and dogs that our antiseptic remedies are the cause of these complications. He injected into the animals when in perfect health one-tenth to one-twelfth the amount of corrosive sublimate and carbolic acid necessary to kill them. He then extirpated one kidney and examined it microscopically, with the result that in all cases he found glomerulo-nephritis. There was exudation between the glomerulus and the capsule, and the epithelium of the tubuli contorti was almost entirely destroyed. He also found fatty degeneration of the liver and spleen, the heart-muscle, etc. The various antiseptic agents were found to be injurious in different degrees, corrosive sublimate being the most dangerous, then the others in the following order—iodoform, carbolic acid, salicylic acid, boric acid. Senger recommends surgeons to avoid antiseptics in operation on the thorax and abdomen, and urges them either to employ sterilized water or a solution of salt. By bacteriological and pathological researches he found, first, that this kills the streptococcus pyogenes aureus in twenty-eight minutes, and that the effect is independent of the degree of concentration, for a five per cent. solution of salt is just as effectual as a twenty per cent. Secondly, he claims to have shown that chloride of sodium does not in any way injure the organs, and that no dose is strong enough to kill any animal.—(*Brit. Med. Journal*, May 19, 1888.)

Treatment of Enlarged Prostate.—Mr. Reginald Harrison of Liverpool, in a recent lecture (*Lancet*, July 21, 1888) on the *Pathology and Treatment of Enlarged Prostate*, says:—"As to the treatment of prostatic hypertrophy when the part has to a large extent assumed the structure and properties of a fibroma, I would like to say a few words in conclusion. The degree of vesical irritation and obstruction under these circumstances is sometimes very intense, and various means have been proposed to deal with this condition by operative procedures having for their object either the section of the obstructing part with provision for more perfect drainage of the bladder by artificial means, or removal of more or less of the prostatic mass. In both of these directions considerable relief has been afforded. Having regard to the fibroid condition the part assumes, I have thought, if there is any truth in Apostoli's treatment, that it is possible it might, under these circumstances, prove serviceable. I have now this subject under consideration. I am aware that electrolysis has been practiced both in this country and in America, but I cannot say that as yet we have sufficient evidence to warrant its more general adoption. I would lay stress on the examination of the prostate from the rectum as determining our views in reference to the patient's future when retention of urine is due to this cause. When this happens in a person with a hard, nodulated prostate, where there is evidence to the touch that fibrous tissue predominates largely over the muscular, the power of the bladder seldom returns and the use of the catheter is generally perpetual; but when, on the other hand, the prostate is found soft and yielding to the touch, indicating that muscle still prevails, we may, as a rule, anticipate complete restoration of function.

Tumors of Bladder Diagnosed by the Electro-Endoscopic Cystoscope.—Dr. Max Nitze (*Lancet*, April 21, 1888) reports fifteen cases of tumor of the bladder diagnosed by this instrument during the last sixteen months. In eight cases the tumor was extirpated, seven by high section, and in the one case, a woman, through a dilated urethra. The article is accompanied by diagrams of the instrument which he invented, and to which

the name of Leiter has been attached without authorization by him. Leiter, in order to make the instrument, had first to buy the patent from Dr. Nitze.

Trephining for Meningeal Hemorrhage.—Cases of meningeal hemorrhage due to injury from blows or falls are not uncommon, and many cases could be saved if recognized early enough and operated on. At the meeting of the Medical Society of London held March 26th, Mr. Davis Colley showed a carman, aged 53, who, on October 21st, 1887, when driving a van, fell down a distance of twelve feet, striking the side of his head. He was insensible at the time, but recovered consciousness. He then had slight paralysis of the left arm and bruising of the right temporal region. There was no indication of fracture. An hour afterwards he had complete paralysis of the left arm and slight loss of power in the left leg and side of the head. Next day there was noticed a little numbness on the left side. He continued in much the same condition for ten days, passing his evacuations involuntarily ; was very drowsy, with a slow, weak pulse, temperature below 97°F., and slight delirium. On the eleventh day Mr. Colley trephined immediately in front of the middle of the right fissure of Rolando, using a semi-circular flap. He came down on the centre of a large clot, which he removed partly with his finger and partly by irrigation with bichloride of mercury. There was no suppuration and the patient recovered rapidly. On the seventh day he was worse again : this was found to be due to pressure of the dressing. He could now move his arms well and grasp firmly. Mr. Colley remarked that cases of successful trephining in hemorrhage between the skull and dura mater were very rare. Mr. Jacobson had succeeded in finding only ten cases recorded during the last one hundred years.

Excision of the Tongue.—Mr. Walter Whitehead (*Lancet*, Jan. 28th, '88), in a paper on the above subject, states that he has now performed entire excision of the tongue by scissors in ninety-one consecutive cases. He has had a series of twenty-one cases without a death, but he does not give the total mortality in his ninty-one cases. Mr. Whitehead's method of excision

has already been before the profession for more than ten years, and has been, in fact, almost universally adopted by surgeons. In the present paper he contrasts this operation with removal of the tongue by the écraseur much to the detriment of the latter method. He holds that partial extirpation of the tongue is a wrong procedure, and advocates total extirpation in every case. He says that the patient can eat and speak better when the whole tongue is taken away than when a portion only has been removed, and that as no surgeon can define the ultimate limits of the disease when dealing with a cancerous growth, it is better to err on the right side and remove plenty. If the lymphatic glands are affected as well as the tongue, they may be removed at the same time as the tongue, or, what he considers a still better procedure, at a later period, as soon as the patient has recovered from the first operation. In removing the tongue through the wound he uses Mason's gag. In not one of his ninety-one cases has he been troubled with hemorrhage. The arteries are easily secured either before or after cutting them. He uses torsion entirely, and has abandoned ligatures. Since he has adopted torsion he has never had a case of secondary hemorrhage. After operation he made use of an antiseptic varnish to cover the wound, after having washed the wound thoroughly with perchloride of mercury solution. The varnish used consists of the ordinary constituents of Friar's balsam (Tinct. Benz. Co.), substituting a saturated solution of iodoform in ether for the rectified spirit. This dries immediately and leaves a firm coating on the wound which lasts for twenty-four hours. He prefers this to the sticky gauze of Billroth. When the varnish is used the patient can take food by the mouth the day after operation. After removal of the tongue Mr. Whitehead never encourages the patients to consider themselves invalids, in fact the less they adopt the recumbent position the better. Open air exercise (weather permitting) should be taken on the second day after operation, as it helps to promote rapid convalescence. Many of his cases of excision are alive after two, three, four and five years; one old lady whose tongue he removed in 1872 died from other causes in 1886. He looks

upon statistics in excision of the tongue as fallacious, and says if he were to select his cases he would be surprised if he ever had an unfavorable termination. He is in the habit of removing tongues far advanced with malignant disease merely for the sake of relieving the pain and removing from the mouth a source of intolerable disgust. In these cases and those where the glands are involved the death-rate is necessarily high.

Mr. Whitehead must see many of his cases at a very early stage of the disease. It has never been my lot to operate on a case of cancer of the tongue where the lymphatic glands were not involved. It is not every patient that will consent to a second operation for the removal of the glands. I have always removed the whole tongue by scissors after the method of Mr. Whitehead, but have also previously tied the linguals in the neck in all cases. I have also for some time employed with good results the mixture used to impregnate Billroth's sticky gauze as a paint, for I have not found the gauze to remain any time in the mouth. This paint of iodoform resin and spirit, with a little castor oil added, makes a capital protective antiseptic varnish. The early convalescence of Mr. Whitehead's patients is worth noting, and speaks well for his method; his advice to get them out of bed on the second day is quite a new departure in the treatment of excision of the tongue.

On the use of Rectal Insufflation of Hydrogen Gas to detect injuries of the Gastro-intestiual Canal in penetrating wounds of the Abdomen.—Prof. Senn of Milwaukee, at the last meeting of the American Medical Association (*Med. News*, May 15, '88), read a paper on the above subject and showed by experiments on animals how readily this method of diagnosis could be put in practice, and with what certainty wounds of the intestines could be detected by its use. Dr. Wm. Mackie (*Medical News*, June 9th, 1888) reports a case of *Gunshot Wound of the Intestine*, where the site of the injury was located by means of hydrogen gas. The patient was a colored man, aged 27, who had been shot in the abdomen with a 38 calibre pistol a little to the left of the linea alba and a little below the costal arch. The patient was etherized and rectal insufflation effected in the following

manner: A five-gallon rubber bag filled with hydrogen gas was connected by rubber tubing with a long glass tube of an extemporized chemical wash bottle half filled with water. To the short glass tube passing through the cork only was attached, by rubber tubing, the rectal nozzle of an enema syringe. This bottle was introduced so that the rapidity of the inflation could be judged of by the bubbling of gas through the water. When the rectal nozzle had been introduced, slow, steady and continuous pressure was made on the rubber bag. Under very slight pressure the gas commenced to bubble through the water. As inflation progressed the abdomen, previously flat on percussion from the umbilicus to the pubes, became resonant and the area of liver dulness diminished from below upwards. The inflation was continued until the abdomen became uniformly distended and tympanitic throughout. Still no gas escaped through the wound of entrance until the abdomen was firmly compressed, when there was an intermittent escape of gas and blood through the wound. The gas, however, could not be lighted by the matches used; but the escape of gas proved that the intestines had been injured and immediate laparotomy was performed. All the intestines were found distended with gas except the stomach and duodenum, and in each of these two wounds were found. These were closed, but the patient died thirty-six hours after of septic peritonitis.

In the *Medical News* of same date Dr. Wm. J. Taylor reports a case where hydrogen gas was used to determine the site of a fæcal fistula, whether it was in the large or small intestine. In order to determine the question Dr. Keen inflated the bowel with the gas in the way advised, and in less than half a minute, and before any gurgling was heard in the ileocæcal valve, gas was seen to bubble out of the fæcal opening, and on bringing a lighted candle near it the gas took fire. A small exploratory opening was then made in the abdomen and the fæcal fistula was found to arise from a carcinoma of the large bowel. The disease, however, had progressed far beyond operative relief, and the operation was not proceeded with.

Considerations on the Pathology of the Cæcum and Appendix.—Dr. Joseph Ransohoff of Cincinnati, in a paper on this

subject (*Med. News*, June 2, '88), says there are most excellent reasons for dividing inflammations in the right inguinal region into those of the cæcum, and those of the appendix, and each, again, should be divided into those of the part itself and those of its peritoneal investment. Thus the affections would be typhlitis and perityphlitis, appendicitis and periappendicitis. The inflammations of the appendix are of much more frequent occurrence than those of the cæcum proper. Perforations which occur in the cæcum are not often produced by foreign bodies; they are not infrequently produced by tuberculosis. In 25 cases of perforation in this region collected by the author only one was of the cæcum. Kraussold claimed that between the ages of 20 and 70 every third body will show traces of disease of the appendix, and that in tuberculous subjects it is often converted into a tubercular ulcer. In 60 examinations made by the author, in only 8 cases were there either abnormal adhesions, unusually hard fœcal masses, or cicatrices on the surface. This discrepancy may be due to the difference in food, where much vegetable food is taken, as in Siberia there is greater frequency of diseases in this region.

The history of appendicitis is like that of inflammation in any other narrow mucous canal with their catarrhal, ulcerative and cicatricial stages. Perforation is due in three-fifths of the cases to foreign bodies. In other cases the appendix degenerates into a retention cyst. In a fair proportion of cases (7 out of 25) no foreign body or fæcal mass can be found, nor can rupture of a cyst or tubercular ulceration account for the perforative peritonitis. In such cases the distal inch or two of the appendix is found gangrenous. This condition, Dr. Ransohoff thinks, is brought about by the displacement of the appendix and consequent torsion of its vessels. The exciting cause of perforative appendicitis is, in one-fifth of the cases, a violence from blows, excessive exercise, lifting, or vomiting. In cases of perforation where the contents of the appendix are thrown into the general peritoneal cavity, death ensues rapidly and before adhesions form. In many cases, however, gradual drainage prepares the way for limitation of the resulting abscess. The abscess from it may come to the sur-

face above or below Poupart's ligament, towards the hypogastrium, loin, or it may open into some hollow viscus, as cæcum, rectum, vagina, etc. Dr. Ransohoff appends the following aphorism to his paper: "Place not your faith in exploratory punctures; operate early and by lateral laparotomy where the symptoms are of the gravest and a tumor is not forthcoming; reserving the incision parallel to Poupart's ligament for abscesses that are palpable."

Laparotomy or Enterostomy.—Dr. Roswell Park of Buffalo (*N. Y. Medical Record*, March 3rd, 1888) gives a *resumé* of the recent literature on the treatment of obscure cases of acute intestinal obstruction; his conclusions are as follows: When a case of acute obstruction is seen *very* early, an exploratory laparotomy may be justified. When a case is seen very late, enterostomy is probably the only justifiable operation.

Laparotomy is especially indicated when the nature of the obstruction is recognized or made reasonably evident; when a small tumor indicating intussusception is made out; when the obstruction is caused by neoplasms which can be removed; when the condition of the peritoneal cavity demands washing out or drainage.

Enterostomy is especially indicated when no idea can be formed of the nature of the obstruction; when the malignant element includes hope of permanent benefit; when the abdomen is particularly tympanitic; when the patient's power has been undermined by the severity of the disease.

Laparotomy is the more radical and surgical measure, but somewhat the more dangerous.

Enterostomy is safer and quicker, causing little or no shock, but entailing certain very disagreeable sequelæ, suitable for all desperate and some favorable cases. Abdominal section should never be done in *extremis*; enterostomy may be.

Results of Laparotomy for Acute Intestinal Obstruction.—Dr. B. Farquhar Curtis, in a paper on this subject (*Annals of Surgery*, May, 1888) gives a series of tables showing the results of operations in cases of acute intestinal obstruction. He has collected 328 cases, with a mortality of 226 (68.9 per cent.)

In 101 cases the failure of the operation was due to the condition of the patient. In 28 cases the cause of obstruction was not found or could not be removed. In 17 cases sepsis, probably due to the operation, was the cause of death.

The reader is referred to this article for further information, and also to an editorial on the same subject in the same number of the *Annals*.

In the *Annals of Surgery* for August, 1888, is an interesting paper by Dr. H. E. Dalton of St. Louis on *Gunshot Wounds of Stomach and Liver treated by Laparotomy and suture of Visceral Wounds with Recovery*. Appended to the paper is a table of all the published cases of laparotomy for gunshot wounds—in all 69 cases, with 27 recoveries. In no case has Dr. Dalton been able to discover that the liver has been successfully sutured, and he thinks he is justified in claiming priority in the matter. In the *Brit. Med. Journal* for June 16, 1888, is an abstract from the *Riforma Medica* of a case of wound of the liver in a man aged 28 from knife stab, by Prof. Postempski. The wound was sutured with 6 chromised gut sutures, and the man made a good recovery.

Wounds of the Abdomen.— In the August number of the *Annals of Surgery* are reports of number of cases compiled from Russian sources of wonderful recoveries from stab wounds of the abdomen, with lesions and protrusions of the bowel. In one case, where the surgeon saw the patient twenty-four hours after the injury, which was caused by a staff armed with a pointed iron, he found a woman, aged 53, in a small hut, full of people, lying on a large wooden bench. She was pale and complained of agonizing pain ; her belly was wrapped in a mass of dirty rags. The latter being removed, a loop of bowel was found strangulated in a clean cut wound situated 2½ c.m. below the umbilicus. It was returned and the wound sewed up. The woman made a good recovery. Another case of stab wound of the abdomen, the patient a lad aged 17, was found in a loft crowded with laborers, and the abdomen was covered with dirty rags, on removing which the abdomen was seen to be covered with highly distended and congested intestinal loops,

amidst which omentum was visible here and there; a round worm and soft fœcal matter present among the loops showed that the weapon had penetrated the bowel. The abdominal wound measured 1½ inches in length. With great difficulty the man was placed under chloroform, for the struggles of the patient caused more bowel to protrude, besides there was not a single assistant and the room was small, hot, and sultry, as only Russian rooms can be in January. The bowel was finally returned, and the patient was quite well on the thirty-fourth day. Dr. Bekleinsheff observes that "the practitioner of this kind only too often finds himself in conditions in which one can venture to render medical aid only after summoning one's whole strength and courage. One single assistant is pure country air; to its agency the fact should be attributed that the rustic dirt does not give rise to such harmful consequences as are daily observed in towns in absence of ideal cleanliness."

Elements of Success in the Operation for Cleft Palate.—Mr. Howard Marsh, in a paper in the *Lancet* of July 7th, 1888, draws attention to several important and essential points in the treatment of cleft palate by operation. He states that the mistake sometimes made is that of operating too early. It is possible to cure the slighter forms of cleft of the soft palate in children who are only a few months old, but even in the most favorable cases failure will be more frequent than success. It is better to postpone the operation until the child is two or three years old, or older still, unless he is well grown and strong. When the hard palate is involved the operation had better be postponed till the child is three and a half, and in the average run of cases it is better not to operate till the patient is four or five. Of course the earlier the operation the better the articulation, but if the success of closure of the palate was the only point to be considered, the best age would be between nine and twelve. Care must be taken to see that the child is in good health before operation is undertaken. The temperature should be taken morning and evening for three days before operation. Care must also be taken to ascertain that the child has not been

exposed to any of the exanthemata, especially scarlet fever. Should the patient have a cough or diarrhœa, the operation should be postponed. Again, the width and shape of the fissure is most important, also the conformation of the long arch of the palate. The mere antero-posterior extent of the cleft is immaterial; the really important points are the width of the fissure, the shape of its anterior end, and the height or pitch of the arch of the hard palate; the wider the cleft the more difficult it will be to close it. When the anterior end of the cleft is pointed like a thin wedge, the shape is favorable; but when the anterior end is rounded like the bow of a hair-pin, even though the cleft behind is not very wide, the difficulty of closure will be considerably increased. As to the arch, the higher the arch, the width remaining the same, the easier will the closure be.

In performing the operation, several points have considerable effect on the result. When the edges of the cleft have been pared, the soft parts on either side should be freely separated, not only from their general connections with the bones which they cover, but especially from their line of attachment to the posterior border of the horizontal plate of the palate bone. Separation should be effected by the free, though careful, use of blunt-pointed curved scissors, employed first to divide the structures along this line, and then the blades being closed, as an elevator, to complete the separation further forward. The palate will now hang in a flaccid state in its whole length, and its edges will admit of easy approximation. When the cleft is extensive the soft parts should be detached from the bones, not only along the borders of the cleft, but outwards and upwards nearly to the teeth. Another point is the relief of tension on the line of sutures by making lateral incisions. The incisions should run from before backwards and a little outwards, midway between the sutures and the alveolar process. The whole thickness should be divided only at the anterior half of the incision. The sutures should be of silver for the hard palate and of horse-hair for the soft. The first silver suture should be placed at the junction of the hard with the soft palate, then the soft palate should be closed to the tip of the uvula, and, lastly, the hard from behind forwards.

For four or five days after operation the child should be fed exclusively on milk and beef tea, with a little brandy added to the milk if necessary. From the sixth to the fourteenth day he may have bread-crumbs soaked in gravy, bread sauce made with milk, or finely browned potato in gravy. No solid food should be given until the palate has healed and the sutures have been removed. The palate should not be looked at for the first week, as opening the mouth does harm. The sutures should not be removed until the tenth day.

Mr. Marsh's directions are well worthy of attention; there is no greater disappointment to the surgeon than a failure in the operation for cleft palate. Not unfrequently the operator fails on account of the supervention of scarlet fever or other exanthem. With regard to the sutures, silk-worm gut is more easily managed than horse-hair, and silk than wire. The silk-worm gut may be left in indefinitely without causing any irritation.

A New Method for the Treatment of Indolent Ulcers.—Dr. F. Spaeth (*Centralblatt f. Chirurgie*, No. 14, 1888) says that the reason failure is so frequent in the treatment of indolent ulcers is because of the deficient nourishment of the surrounding tissues; for this reason many methods, such as Thiersch's, though temporarily successful, often fail. To bring about a better condition of the ulcer and its surroundings is his object. His method is as follows: The whole ulcer is divided from one end to the other by incisions which reach into the healthy tissue beyond, and transverse incisions are made in the same way, through the callous boundary of the ulcer into the healthy tissue. These incisions should be about two centimeters distant from one another. The incisions should extend not only through the skin, but into the subcutaneous fascia. The bleeding can be controlled by pressure, and the parts should be dressed with a firmly and evenly applied iodoform gauze bandage. This should be left on for from eight to fourteen days, when it is removed. The ulcer will be found to be granulating in a healthy manner, and now, if necessary, may be closed by the transplantation of skin. The results Dr. Spaeth has found excellent; the resulting scar is soft and well-nourished, and there is no tendency of the ulcer to relapse.

Primary Operations for Breast Cancer in von Bergmann's Klinik from the Autumn of 1882 *to May* 1887.—J. Rotter (*Müncher Med. Woch.*, 1887, No. 49) gives an account of 114 primary operations in which the breast, neighboring fat, pectoral fascia, portions of the pectoral muscle, and the axillary glands were removed. In only two cases were indurated glands not found in the axilla. Three times was the axillary vein tied and once the vein and artery. Once the pleural cavity was opened, but the patient made a good recovery. In five cases death shortly followed the operation—one each from hemorrhage of the stomach, lung embolism, brain embolism, collapse (after amputation of both breasts), and sepsis. In 30 cases the disease recurred in the breast wound. In 6 the disease returned in the opposite breast. In one case only was the axilla alone engaged. Twelve patients had recurrence of the disease in internal organs without local or regional recurrences. In 18 cases the cause of death was not ascertained. Thirty-four cases remained free from a recurrence of the disease up to date; 5, one to six months; 7, six to twelve months; 4, one to two years; 5, two to three years; 8, three to four years; and 5, from four to four and a half years, so that 13 may be regarded as definitely cured. These 13 recovered out of 43 operations from the autumn of 1882 to end of May 1884.

Excision of a Dislocated Spleen and subsequent Expectoration of the ligature of the pedicle.—Dr. T. H. McGraw of Detroit reports (*N. Y. Med. Record*, June 30, 1888) a successful case of extirpation of the spleen in a woman aged 40, and in the same paper mentions another case in a man aged 27, where death ensued $2\frac{1}{2}$ hours after operation from hemorrhage.

QUARTERLY RETROSPECT OF GYNÆCOLOGY.

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Stenosis of Cervical Canal.—Dr. More Madden says: "This is not only the most common of all the causes of sterility, but is, moreover, according to my experience, the one which proves most amenable to appropriate treatment. Believing as I do that though both dilatation and incision of the cervix may be successfully employed in many cases, I also know that both these plans very often fail in permanently overcoming the natural contractility of the cervical structures, and that after each operation the canal too commonly rapidly resumes its former condition, and frequently, from cicatricial contraction, becomes still less permeable than before the operation. Hence I now desire to direct attention to the advantage I have observed in the treatment of such cases from the method of procedure and the use of instruments by which the parts are so forcibly separated and torn apart rather than cut as to reduce any risk of their reunion. I will here refer to the method I employ in such cases in my hospital practice. The total number of cases on which I have operated during the last ten years now exceed four hundred. The operation should be undertaken a few days after the catamenial period, and should be preceded by daily hot water irrigations. Under ether the patient is placed in Sims' position and the cervix drawn down by a volsella. I pass my uterine director, which is a long probe-pointed instrument, and along its groove pass a triangular-shaped blunt-edged knife into the uterine cavity. It is then rotated and withdrawn in the opposite direction." Dr. Madden also employs Simpson's original metrotome for this purpose, and regards it as better than either Emmet's or Sims' instruments. Dr. Madden says: "The permeability of the cervical canal is best maintained by the use of the dilator. Immediately after the incision I employ one, not merely with the view of thoroughly expanding the canal and its orifices, but also for the purpose of tearing the divided tissues and vessels and thus arresting any excessive hemorrhage. The extent of dilata-

tion depends largely upon the indications of each case. As a rule, in ordinary cases expansion to the extent of 1¼ inches suffices. After thorough dilatation the cavity of uterus is washed out with hot carbolized solution. The cervix is now packed with absorbent cotton saturated in glycerine and carbolic acid, and plug the vagina with the same. The latter is removed in twenty-four hours, the former in sixty hours if not sooner expelled. A large-sized soft rubber stem is now introduced. The patient should be kept in bed for a fortnight after the operation and the uterine cavity daily washed out with plain or medicated water. Before the patient leaves her bed a carefully adjusted Hodge pessary is introduced to support the pelvic floor. The patient should remain in bed during the next menstrual period. She should then wear a soft rubber stem until the approach of subsequent period."—*Brit. Med. Journal.*

In regard to the time the operation of dilatation should be performed I think Dr. Goodell's advice is better than Dr. Madden's—namely, midway between the periods. I also deprecate very much doing the operation on the side. The lithotomy, with Simon's speculum, is the proper position, carried out as the Germans do. Here we can pull the uterus down more easily, and can keep up a constant stream of boiled water running between the blades of the dilator during the whole period of the operation. In this way coagulated blood is not allowed to form in the wound fissures—a frequent source of infection—and the instrument is managed much more easily.

I do not agree with Dr. Madden in his partiality for Simpson's metrotome over Sims'. It, of course, is largely a matter of fancy, but a skilled operator will always prefer an instrument which does not work as a machine turned by a spring or stop-screw, but that which is under the special control of his own judgment. In speaking of the dilatation or divulsion part of the operation, Dr. Madden performs simply Dr. Goodell's operation of divulsion or rapid dilatation originally suggested and practised by Dr. Ellwood Wilson of Philadelphia. In all of these cases it is well to thoroughly curette the endometrium, and where there is much papillary erosion of the cervix to exsect the mu-

cous membrane of the cervix in its entirety after Schröder's method.

Endometritis and Sterility.—"Chronic endometritis is incompatible with fecundity, and as long as that disease exists to any serious extent the patient must remain barren. In such cases not only is impregnation mechanically obstructed by the viscid glairy secretion by which the os and inferior segment of the cervical canal is sealed in all cases, but also the inflammatory action going on within the uterus may prevent the formation of the membrana decidua; and hence the ovum, even though impregnated, is necessarily thrown off without any manifestation of its existence in the fertilized state. Also, the diseased condition of the lining membrane of the uterus may be extended to the Fallopian canals, obliterating for a time their internal orifices, so as to oppose an insurmountable barrier to impregnation. Again, the uterine secretions in cases of endometritis may be inimical to the active existence of the spermatozoa. Dr. Madden recapitulates as follows:

1. That congestive hypertrophy of the uterus, and especially of the cervix, is a very common cause of sterility.

2. That these conditions are, in the majority of cases, occasioned by constitutional causes, one of the most frequent of which is the scrofulous diathesis.

3. That these diseases require constitutional as well as local treatment, and would again urge the benefits to be derived in such cases from certain mineral and thermal waters."

Ovarian and Tubal Sterility.—Dr. More Madden says:—"Ovarian inflammation is one of the most frequent consequences and accompaniments of endometritis. In these cases the inflammation extends from the uterus along the Fallopian tubes to the ovaries, and this to a great extent accounts for the fact just mentioned that patients suffering from endometritis are invariably sterile. In such cases the inflammatory action is generally attended by a viscid exudation, by which the tubes, and especially their uterine orifices, are mechanically sealed against the possibility of impregnation. Independently, however, of its frequent sequence on endometritis, tubal obstruction, productive

of dysmenorrhœa and sterility, may also arise from those possible graver, but, according to my experience, comparatively exceptional diseases, namely, idiopathic salpingitis and pyo-salpinx, in the treatment of which operative procedures, involving loss of all future conceptive ability by the complete removal of the uterine annexa, are now so readily resorted to by some practitioners. For my own part, having in not a few cases seen all the supposed symptoms of pyo-salpinx subside completely without any surgical interposition whatever, it would seem to me quite as rational to amputate the breast for an ordinary mammary abscess as to remove the Fallopian tubes merely because they may be the seat of serous or purulent exudations. In some cases of the latter kind there is, as I can vouch from clinical experience, no absolute impossibility of reaching and removing such collections by aspiration or even by catheterization of the Fallopian tubes. Many years ago, having occasion to use the sound in a patient suffering from dysmenorrhæa and sterility, I was surprised, there being no enlargement of the uterus, to find the sound pass in up to the handle, and on palpation discovered that obviously it had entered the right Fallopian tube. A year subsequently that lady gave birth to her first child after eight years of married life. Since then I have more than once succeeded in accomplishing by a little careful manipulation what in the first instance was but a happy accident. And hence I endeavor to impress on those who attend my hospital practice the fact that the catheterization of the Fallopian tubes, when employed by a practised hand and with due caution, is a feasible, and in some exceptional instances may possibly prove an effectual method of treating certain cases of dysmenorrhœa, sterility, and other morbid conditions. Sterility may also arise from causes irrespective of any physical lesion; and although impregnation in no way depeuds upon the sexual organism, unquestionably it may be prevented by strong mental emotion or by personal dislike. In some instances, however, sexual incongruity productive of sterility coexists with conjugal affection. Thus I have more than once been consulted by sterile patients, happily married, desirous of offspring, and not suffering from any physical disability, who

informed me that, though warmly attached to their husbands, not only was there absolute sexual indifference, but even positive repugnance to coition, any attempt at which in one of these cases invariably produced nausea. In that case I may add that the last-mentioned symptom was allayed by the use of cocaine suppositories. Still more commonly is sterility dependent on abuse or abnormal irritation of the sexual organs, and hence the general sterility of prostitutes. In the treatment of infecundity, independent of any local disease, malformation or displacement, or of any obvious derangement of the general health, or other tangible cause, and in which the mineral waters have either been tried without benefit, or are contraindicated or not available, a course of sea-bathing, whatever may be its *modus operandi*, is a prescription the occasional efficacy of which in such cases I have seen proved by experience."

I do not agree with Dr. Madden in the analogy he draws between the Fallopian tubes and the breasts as points of abscess formation. The comparison is absurd when we consider the difference in mortality and importance between these organs from a surgical standpoint.

Neither do I accept Dr. Madden's views as being sound regarding the treatment of pyo-salpinx other than surgical. If Dr. Madden has seen a few cases of *supposed* pyo-salpinx subside on medical treatment they should be eliminated as unproven, and were in all probability patients possessing healthy tubes. Bandl speaks of the great difficulty of diagnosing, with any degree of accuracy, hydrops tubæ. He says: "The certain diagnosis of a hydrops tubæ is only possible in the very rarest cases when there is a coincidence of many favoring circumstances since we have seen no characteristic symptoms, and since we can only suspect it when women complain of pain in the lower abdomen. We can only obtain a diagnosis by the bimanual examination. This will only be certainly possible in those cases where the tubal tumor has no special adhesion to its surroundings, so that we can detect the seat of the tumor and the nature of its connection with the uterus. If the tubal tumors are sunk in Douglas' pouch, if they are adherent, or if inflammatory pro-

cesses lead us to examine the patient, the characteristic form of the tumor is usually lost and may be mistaken for various conditions, such as small ovarian tumors, soft fibroids, or sacculated exudations. Cases in which tubal tumors have been recognized during life are rare."—*Cyclop. Obst. and Gyn.*, vol. xii.

Dr. Madden says "there is no *absolute impossibility* of reaching and removing collections within the tubes by aspiration or even by catheterization." There are few endeavors in surgery absolutely impossible, but I think these two procedures are almost on the border line. To encourage attempts in this direction is certainly not good teaching. Dr. Madden may have been under the impression that he passed the sound through the Fallopian tubes in one of his cases cited, and the fact of the woman becoming pregnant afterwards is no proof at all, it is merely a coincidence. Dr. Madden will require to bring more substantial proof than he has done of the ease and feasibility of catheterizing the Fallopian tubes before he will impress the specialist in gynæcology, even when conducted by so practiced and cautious a hand as Dr. Madden possesses.

Bandl says in regard to catheterization of the Fallopian tubes*: "When we undertake to sound a diseased tube, we must take into consideration the fact that in the cadaver, under normal conditions, the tubes of married or unmarried women cannot be sounded by large or small sounds, as has been proved by Albers, Hennig, Wegner and myself. Also during life, with wide uterine cavities, the dilatation may give rise to the idea that possibly the situation of the tubes, which has never occurred to me, may be found and the sound passed. We must always take into consideration the fact that the sound can be passed through the uterine substance near the opening of the tube. This easily happens when the uterus is still in the condition of puerperal involution, as was observed by Robt, Rückard and Lehmus, that on the thirty-fourth day after delivery it is easy to pass a sound through the uterine wall into the abdominal cavity, and Wegner demonstrated by necropsy the presence of perforation of the muscularis of a dilated and partly fatty uterus. In the

* Cyclop. of Obst. and Gyn., Vol. XII.

same manner the sound was easily passed through the uterus in four other cases. Hönig describes perforation of the uterus, and Alt two cases where the sound was passed from six to seven inches into the uterus of a recently delivered woman, causing perforation; Tait also described such cases in the *Lancet* of 1872-3. Perforation of the uterus with the sound can very easily occur in extra-uterine pregnancy, a case of which we have ourselves observed and described. In this case, by very light pressure the sound was passed nine inches, perforated the uterus and produced the impression that the tube had been sounded; but the necropsy showed a perforation close to the uterine opening of the right tube. It is interesting to notice that in almost all described perforations of the uterus reaction did not occur. It was so in four cases of Robt, Rücklard and Lehmus, in three cases of Lawson Tait's, in our own, and also by Zini, who could in seven cases in the first six weeks after involution pass the sound eight inches into the uterus, and often felt the knob of the sound through the abdomen to one side of the median line without reaction. From these various observations it is doubtful whether a tube has been sounded, and it is certain that the greatest care is necessary in such an undertaking."

Puncture of tumors of the Fallopian tube through the vagina is an exceeding difficult and hazardous thing to do, chiefly on account of the difficulty in making an accurate diagnosis, but also of the danger of wounding the intestine. Simpson was probably the first to employ it, and to him is credited the cure of some cases by this method. Who knows but Tait's improved method of dealing with such cases may not have been an outcome of some of the disastrous results witnessed in Simpson's practice.

Mr. Tait's Method of Flap-Splitting.—Dr. H. T. Hanks of New York writes a paper in the *International Journal of Surgery and Antiseptics*, describing and illustrating the method of operating on vesico-vaginal fistula, ruptured perineum and umbilical and ventral hernia. He describes Tait's method as follows: "The patient is placed in Sims' position, varying somewhat according to the location of the fistula. He then inserts

the Ferguson speculum and brings the fistula in exact view. Then with a delicate pair of scissors he incises at the proximal and distal extremity of the fistula the mucous membrane of the vagina for one-third of an inch. This is a preparation for the splitting up of the mucous membrane of the vagina from the mucous membrane of the bladder for a depth of from one-twelfth to one-eighth of an inch all around the fistula. This work thus far is all done with the same pair of scissors through the cylindrical speculum. The speculum is then removed, the index finger introduced, and with his finger-nail he makes sure that the two laps are properly separated, going over the same course that he has already cut up with the scissors. Then pushing the vesical flap forward into the bladder, and turning the vaginal tissues backwards into the vagina. In this way the wonnd is made ready for the suture. If the fistula is of small or medium size, one suture completes the operation. A delicate Peaslee needle, single curve with carrying-thread, is the only instrument that Mr. Tait uses in introducing the suture. He inserts the point of the needle at the proximal end of the wound, and passes it to the right or left, as the case may be, through the tissues directly underneath the angle of the flaps, all the way around to the distal extremity of the wound, where he makes the point emerge into the vagina again. He now threads the delicate silver wire wholly by the sense of touch into the carrying-thread and withdraws the needle ; the fistula is now half surrounded with the suture. Exactly the same course is pursued in passing the needle on the opposite side ; and when the needle is withdrawn the suture will have completely surrounded the fistula. While drawing up and twisting the wire, he keeps one finger in the fistula to make sure that the mucous membrane of the bladder is pushed into that viscus, and the mucous membrane of the vagina is drawn upward into that passage. The parts are then drawn together and held in apposition in precisely the same manner as a purse is drawn up by a purse-string."

In the operation for laceration of the perineum the same method of flap-splitting is carried out, without removing any tissue, and the purse-string suture is used to bring the parts

together. If the tear is extensive, and much splitting is found necessary, several sutures are used. But Mr. Tait's operation is especially adapted to cases of complete laceration, where the rectum is involved more or less. On comparing the diagrams of Dr. Hanks' paper showing this operation in cases of laceration of the perineum, and some of those in the *Handbook of Medical Sciences* illustrating the "one suture operation" in the article on "Primary Perineorrhaphy," we are struck with the similarity of the two operations in principle.

Peritoneal Drainage with Iodoform Wicks.—Dr. L. Piskacek (Vienna) protests against the indiscriminate use of abdominal drainage after laparotomies. According to him drainage is indicated (1) in cases of extra-uterine pregnancy, where entire removal of the sac is impossible; (2) in cases of interligamentous cysts, where after the enucleation of the cysts large cavities result; (3) after incomplete ovariotomies, *i.e.*, in cases where a part of cyst-wall must be left behind; (4) if on account of extensive and firm adhesions the peritoneum is torn in many places, much secretion collects, and the operation is protracted; (5) after unclean operations, *i.e.*, where the abdominal cavity becomes contaminated with pus from purulent cysts or abscesses. Strict antisepsis is practised at Briesky's clinic. In place of sponges, pads of corrosive sublimate gauze are used. Catgut is never employed, as it cannot be rendered perfectly aseptic. Kocher has recently shown that in a large number of cases infection of wounds is attributable to the catgut suture. In answer to the question whether the drainage should take place through the abdominal wound or through Douglas's cul-de-sac, the author expresses himself against the latter on account of the danger of entrance of air and germs from the vagina through the drain. He recommends the use of iodoform wicks as a drain, numerous experiments and the abundant clinical material at Breisky's clinic having convinced him of their superiority. Breisky has used them exclusively for a year in peritoneal drainage, both after vaginal hysterectomies and laparotomies. Their advantages over other forms of drains are: (1) Great absorbent power; (2) no occlusion by coagular and dried secretions, as in fenes-

trated drains; (3) absorption not interfered with by the twisting and doubling up of the threads; (4) may be retained for long periods without irritation; (5) are easily manipulated and very cheap. The one drawback to their use—the adhesion of the threads to the granulations—may be obviated, if care is taken at the time of their removal to first draw out the threads in the centre of the drain; the peripheral ones are thus loosened and may be readily withdrawn. The author has also used strips of iodoform gauze as drains, but found their absorbing power only one-third as strong as that of the wicks. As used in Breisky's clinic the wick is composed of fifty threads of cotton yarn, about ten inches long. They are rendered aseptic by boiling in 1 to 1000 sublimate or in a 5 per cent. carbolic solution, then soaking for twelve hours in a mixture of iodoform 5 parts, glycerine 10 parts, and alcohol 70 parts, or in a 10 per cent. solution of iodoform in ether. After laparotomies the wick is inserted so that its lower end rests near Douglas's pouch and the upper protrudes for about three inches from the lower margin of the abdominal wound. It is not removed until the wound-canal has become so shallow that retention of secretions is no longer feared, although in three or four days the threads may be gradually shortened, beginning with those in the centre of the drain. After vaginal hysterectomies two wick drains are inserted in the vaginal wound and the vagina tamponed with iodoform gauze. The gauze is renewed in three or four days, but the drain remains until healing is accomplished. In cases where this method was used protrusions and adhesions of the intestine were never noticed, fever remained absent, and the vaginal wound was usually closed when the wick was removed.—*Medizinische Jahrbücher*, 1888.

Ovariotomy in a Patient aged Eighty-two years and four months; recovery.—The patient (under care of John Homans, M.D., Boston) was a widow and had been the mother of five children, the youngest being 43 years old. Dr. Homans says: "On examination I found a tumor of the left ovary, apparently without adhesions, in an active healthy woman. The presence of the tumor had been known for about two years, and it had grown

rapidly during the last six months. The lady said that if the tumor was likely to render the remainder of her days uncomfortable she would like to have it removed. On Jan. 28, '88, I removed the cyst, which proved to be one of the left ovary, somewhat multilocular and papillomatous. The fluid weighed thirteen pounds, and the solid portion one and three-quarter pounds. On the sixth day the temperature rose to 100.5°F., but subsided the next day, and the patient went home on March 2nd. The oldest women on whom I had previously operated were each 73 years of age—one on November 19, 1881, and the other on December 26, 1883. Both of these ladies are now living in good health. Sir Spencer Wells' oldest case was 71, and Dr. Keith's 73. Mr. E. Matthews Owens of Australia has just operated successfully on a patient aged 79 years and 10 months. I could find no case as old as 80 years, but to make assurance double applied to Dr. J. S. Billings at Washington, and at his request Dr. Lorini made a thorough search without finding any case recorded older than 78 years of age. It will be seen from the above that not a single case of ovariotomy in a woman 80 years old or older has ever been reported, if Dr. Lorini's search has been exhaustive, and I think we may consider it so".—*N. Y. Record,* May 5, 1888.

The *British Medical Journal*, May 26, 1888, in an editorial on this case, states that " Olshausen notes that Schröder successfully operated on a patient aged 70, and on another aged 80. Dr. Miner described in the *Buffalo Med. and Surg. Journal*, Sept., 1866, the removal of a multilocular ovarian tumor weighing 19½ lbs. from a woman aged 82. She died fourteen days after operation. Dr. Homans' patient is probably the oldest who has recovered from ovariotomy."

Rupture of the Fallopian Tube; Recovery.—The patient (under care of Dr. Duchamp, Lyon), who had last menstruated on April 30, 1887, was suddenly attacked on 17th of June with syncope, vomiting, and a feeling of something having given way in her abdomen. Duchamp was called in consultation on the following day and found her in a condition of collapse. The pulse was almost imperceptible, the abdomen markedly distended,

and extremely tender in the umbilical region. The patient was vomiting greenish matter. On being questioned, she stated that the pains had commenced just above the pubic region, and were accompanied for about half an hour by vesical tenesmus. Examination of the vagina disclosed nothing definite. An intraperitoneal pelvic hemorrhage was suspected, and in the afternoon of the same day laparotomy was performed, after previous catheterization and thorough disinfection of the abdomen. A spray was not used. The abdominal cavity contained a quantity of fluid and clotted blood, of which 2.5 liters were evacuated, and a fœtus about two cm. long extracted. Old peritoneal adhesions were found and a perforation of the left tube. The tube and ovarian ligament were tied with carbolized silk at two places close to the uterus, and the remaining part of the tube and the ovary excised. Recovery followed promptly, and three weeks after the operation the patient was discharged cured.—*Lyon Medicale.*

When should the Abdomen be Opened?—Dr. A. W. Johnstone, in *Progress*, says: "What the general practitioner wants to know is not how to make a preparation, but what it will do after the druggist furnishes it to him, and the most that he requires of laparotomy is how many, and what particular kind, of his cases can be cured by it. What I mean by opening the abdomen is ovariotomy in its strictest sense, for I believe the time is not far distant when he who, in the ordinary sense, *taps* an ovarian tumor will lay himself liable to malpractice. The teachings of all most successful operators now are, never to meddle with an ovarian tumor in any way until you are ready to take it out. It is true that now and then we are called to neglected cases whose surroundings are so bad that removal to a more healthy point is necessary, or whose respiratory apparatus is so hampered by pressure as to make an anæsthetic dangerous, and to gain a little time we sometimes tap such cases, but the radical operation ought always to follow in a few days, so that tapping ought never to be thought of except as a very rare *preliminary* to ovariotomy. In case of accidents which will occur to tumors, such as twisting of pedicles, inflammations, suppurations, ruptures, hemorrhages, peritonitis and the like,

we now demand immediate removal; so that whenever any unusual symptoms develop in the course of a tumor, our rule is, no matter what they may be, to operate at once, provided the shock is not so great as to make any additional disturbance certain death; even in these cases, if any reaction takes place, our only course is immediate operation. These accidental things, the most common of which is suppuration, furnish a very considerable proportion of hysterectomies done, but as this introduces us to the subject of operations on the non-gravid uterus, I will give Keith's indications for operating.

1st, In very large (upwards of 20 lbs.) rapidly-growing tumors of all kinds in young women.

2nd, In all cases of real fibrous cystic tumors, if they can be removed, also in all cases of suppurating tumors, in most cases of the œdematous tumor; these often grow to an enormous size, far larger than any ovarian tumor. I have seen one that would not be less than two hundred pounds in weight; sometimes large quantities of red serum can be removed with much relief. I have several times been able by this means to carry patients over the menopause, when the necessity for puncturing ceases.

3rd, These tumors seem to open up the broad ligaments, more than the ordinary hard tumor. Some that I have removed have had very extensive pelvic attachments. These tumors are much reduced by free purgation.

4th, In cases of large bleeding fibroids of any age, provided the patients are not approaching fifty years of age, and provided the lives are practically useless, and that further experience in the operation shall show that the mortality of hysterectomy is likely to diminish.

5th, In certain cases of tumors surrounded by free fluid, the result of peritonitis, provided the fluid shows a tendency to re-accumulate after two or three punctures."

There are several other conditions which could be added to this list, but more especially that of suspected threatening rupture of fœtal sac in ectopic pregnancy.

Ether or Chloroform.—In the *Philadelphia Medical Times* the views of Dr. Hunter McGuire are given. He is wedded to

neither ether nor chloroform. In very feeble people or those suffering from prostration or shock, or loss of blood, he prefers ether. In the very young, or the very old, or in cases where cardiac or renal or pulmonary disease is suspected, he regards chloroform as safer. That both agents kill, all must admit. Which is the more dangerous is undetermined. Chloroform is the more powerful and immediately dangerous anæsthetic ; when it kills it does so by shock, but when the vapor is withdrawn and consciousness returns the danger is absolutely over. Ether may kill, but is less likely to do so, and the danger is not over when the anæsthetic is removed. Alarming symptoms may occur by cardiac paralysis a few moments after, or by acute nephritis or pneumonia, hours or days after the administration. In acute or chronic diseases of the kidneys or lungs, ether is more dangerous than chloroform. Both anæsthetics may produce death if too concentrated a vapor is employed; both may kill during the period of muscular excitement, or by paralysis of the respiratory nervous centres. In giving chloroform it is better to begin with a small quantity, allowing plenty of fresh air until the patient has become accustomed to its use. The patient should never be alarmed or surprised with too concentrated a vapor. It is unwise to give alcohol immediately before the anæsthetic. It is hazardous to operate during partial anæsthesia from chloroform. Ether is the safest. While chloroform is safer in organic valvular disease of the heart, it is more dangerous than ether in a heart weak from fatty degeneration, or from loss of blood, or great anæmia from other causes. Of all elements of danger from chloroform, fear on the part of the patient is the greatest. Ether is then the safer. If there be much terror on the part of the patient, it is better to administer hypodermically a quarter of a grain of morphine and one one-hundredth of a grain of atropine, and wait fifteen or twenty minutes before giving the anæsthetic. The immunity of children to chloroform, and soldiers and women in confinement, he ascribes to absence of fear.

Intra-uterine Medication.—Dr. Robert Bell (*British Medical Journal*) considers the uterus in a large majority of cases the source of the mischief in many of the various affections to which

the tubes and ovaries were liable. It is therefore by suitable treatment of the uterus that such evils were to be averted. Iodised phenol is the preparation which gives the best results. It is aseptic and antiseptic in the highest degree, and the carbolic acid exercises a powerful anodyne effect on the endometrium; it possessed also powerful alterative properties. In treating cases of long-standing endometritis it is necessary to remove the glanular condition of the mucous membrane as a preliminary to the strictly medical part of the treatment. This is effected by means of the curette. He has also fonnd intra-uterine medication useful in a class of cases where it was not usually employed—namely, in displacements. Displacements were invariably associated with a softened condition of the uterine walls from a congested condition of the parts. In conjunction with the use of pessaries, intra-uterine medication did much permanently to remove the displacement.

Effects of Exposure of the Intestine.—At the meeting of the Berlin Obstetrical and Gynecological Society, Prof. Olshausen read a communication on a hitherto unrecognized cause of death after laparotomy where intestine has been allowed to lie outside the abdominal wall for a prolonged period. Here, surgeons are careful to prevent prolapse of the intestines. Coils which adhere to a tumor and cannot be at once separated are carefully covered with flat sponges, or with towels wrung out in hot water which often contains an antiseptic compound. As soon as the adherent coils are separated from the tumor, all bleeding points being secured, they are carefully replaced. As soon as the tumor is extracted through the abdominal wound, or, indeed, whilst it is slipping out of the incision, a broad flat sponge is slipped into the peritoneal cavity to prevent any chance of prolapse, and to protect the gut from the suture-needles. The abdominal incision is, moreover, always made as short as possible so as to avoid the sudden escape of coils of intestine. The Germans are less particular about eventration. Dr. Martin, in 1885, publicly recommended the dragging out of a large amount of intestine in cases where the tumor lay deep in the abdominal cavity, and declared that the greater part of the intestinal tract might be left hanging

out of the abdomen during the whole operation, so that the surgeon might have plenty of room for manipulating the tumor. "This eventration," said Dr. Martin, "is quite free from danger; I have practised it in at least 90 per cent. of my cases without seeing any evil results." Prof. Olshausen was more cautious, and directed attention to certain cases of collapse, often fatal, which followed cases of abdominal section and were not accompanied by symptoms of peritonitis. He concluded that prolonged exposure of the intestines in laparotomy might cause disturbanee in the circulation in the walls of the gut, ending in venous stasis and serous infiltration, with ultimate formation of ecchymoses. At the same time the muscular coat is paralysed, often for several days; if the paralysis does not abate, symptoms of ileus set in. Fatal results of this kind are probably caused by the absorption of decomposing material in the intestinal canal.—*Brit. Med. Journal.*

Abdominal Section, with reopening of the wound on the eighth day for Purulent Peritonitis.—E. F., aged 26, was admitted into the Sydney Hospital on August 31, 1886, complaining of pain in the back, bearing down, and dysmenorrhœa. Micturition was frequent, difficult, and painful. Sexual intercourse invariably painful. These symptoms dated from last confinement, $2\frac{1}{2}$ years previously. She had had two children, and suffered from *phlemasia alba dolens* after the first, and "inflammation" after the second. The os was found to be eroded, everted, and lacerated. The uterus was large and heavy. A hard tender mass occupied the position of the left broad ligament, and the right ligament was thickened and tender. An operation was refused at the time, and when readmitted in October she was very much worse. The uterus was fixed in a mass of inflammatory exudation which extended halfway to the umbilicus. Abdominal section was performed on January 13, 1887. The pelvic orgams were found to be all matter together, but with great difficulty the left broad ligament was isolated and found to contain a cyst the size of an egg. The uterine appendages were then ligatured and removed. The hemorrhage was arrested with difficulty. On the third

day, as all discharge had ceased, the drainage-tube was discontinued. Severe shooting pain at intervals. On the fifth day pus began to flow from the track of the drainage-tube, and the tongue was dry, the temperature rising to 102.2° at night. On the eight day the wound was reopened and an immense quantity of fetid pus evacuated. The abdominal cavity was then thoroughly washed out and the wound closed, a fresh drainage-tube being inserted. On the second day the patient was much better, in spite of a phlebitis of the left internal jugular, left axillary, and right femoral veins. On February 9 the drainage-tube was removed, and on March 26 she was discharged in fair health, pus, however, still escaping through the track of the tube. She markedly improved in health, and resumed cohabitation. She had an attack of hæmatocele on May 12. The menses appeared every month in variable quantity, and were accompanied by flushes and other nervous and vascular phenomena characteristic of the menopause. She gradually though slowly advanced towards good health.

The above is a most instructive case, and proves the wisdom of active interference in all such cases without hesitation.

Ovarian Tumors in Pregnant Women.—Dr. Braxton Hicks, in the *British Medical Journal*, says that in two recent cases of ovarian tumor, associated with pregnancy, the removal of the tumor had been followed by recovery. In the first, labor had continued thirty hours. The tumor came down and prevented the head being seized with forceps; turning was tried and found impossible. The child was finally delivered with long forceps, and was still living. The placenta required removal. The tumor grew rapidly after delivery, and was removed. It was adherent everywhere, and was compound in character, nearly colloid. The patient made an excellent recovery. In the second case there was an ovarian tumor which reached rather above the umbilicus. It was diagnosed to be composed of two cysts. The woman had missed two periods, and it was proposed to wait until after the middle of pregnancy. However, the cyst became tense with pain, and was removed. The pedicle was found twisted, and the tumor adherent and becom-

ing necrosed. No uterine action came on for two weeks, when an ovum was expelled. The cases showed that when ovarian tumor and pregnancy were concurrent, if the tumor gave signs of irritation, the sooner it was removed the better. Dr. Handfield-Jones speaks of the rapid growth of ovarian cysts after the uterus had been emptied. He has known them within two months attain enormous size, and contract adhesions.

The second case here cited resembles somewhat one in which I assisted my colleague, Dr. Wm. Gardner, a short time since in removing an ovarian tumor at the same term of pregnancy. Our case, however, went to full term and was safely delivered.

Correspondence.

The following is from a private letter received from Dr. H. S. Birkett, who is at present in Berlin:

BERLIN, W., 2nd August, 1888.

We visited Bergmann's clinic, and were fortunate to see quite a number of operations, and thus learn somewhat of his methods. The preliminaries of an operation are as follows: The part to be operated upon is thoroughly scrubbed by means of a nail brush, with hot water and soap. Next, irrigation of the part with bichloride solution (1–2000); the region surrounding the part to be operated upon is covered with towels wrung out of bichloride solution (1–2000), thus leaving the part to be operated upon exposed. The surgeon and his assistants wash their hands, first with hot water and soap, next in bichloride (1–2000) and finally rinse them in rectified spirits. The solution for irrigation is bichloride (1–2000); the instruments are kept immersed in sol. carbolic acid (1–30); the the ligatures are cabolised catgut; sutures are also catgut, and twisted silk; the dressings are of fine gauze, impregnated with iodoform, and this is the only way in which iodoform is used; the absorbent material consists of large quantities of washed gauze, whether impregnated with bichloride I do not know; no sponges are used, but portions of this same kind of gauze are substituted; gauze bandages are used. Mixture of chloroform and ether is the anæsthetic.

The operating room is specially suited to its purpose. The floor is tiled, the light comes through a glass roof, no side windows being present; electric light is also supplied if necessary.

Another clinic of interest which was visited was that of Dr. Joseph—skin clinic.

Among many interesting cases seen was one of leucoplasia buccalis. Joseph's treatment of such cases is the use of lactic acid, beginning with 30 per cent. solution in glycerine. This is applied every two weeks, and by means of a stiff brush, the application is rubbed into the affected parts until bleeding is produced. A gargle of precipitated chalk is subsequently used by the patient. The solution of lactic acid is gradually increased to 50 per cent. The case at that time certainly had undergone marked improvement under its use. Joseph also recommends its use in lupus, applied in the same manner.

Upon another occasion we saw a marked case of Addison's disease. The most striking point was the increase of pigment in the axillary regions, flexor surface of arms, and the mucous membrane of mouth.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

UNDER CARE OF DR. SHEPHERD.

(Reported by J. F. SPRINGLE, M.D., House Surgeon.)

CASE I.—*Nephrotomy for supposed Calculus in the Kidney. Rapid recovery and relief of symptoms.*

William B., a strong, healthy-looking young man, aged 24 years, was admitted to this hospital on June 22nd, 1888, complaining of severe and more or less constant pain of a lancinating character in the left lumbar region, and shooting down through the groin to the left scrotum at times. His present affection dates back as far as the year 1880, when he was suddenly seized with an agonizing pain in the region of the left kidney and radiating along the course of the ureter down to the scrotum and end of the penis. The left testicle was tightly drawn up. The patient states that his water was decreased in amount from the

beginning of the attack, high-colored, and depositing some sediment, but did not notice any blood (?). Micturition was frequent, and but a few drops were passed at a time; the stream frequently was interrupted, at which times the patient suffered spasmodic pains. At the end of the second day of the attack the pain was suddenly and completely relieved and the patient felt as well as ever he did. After relief he noticed that his water was increased in amount, dark in color, and with increased deposit; no blood. Did not notice any hard substance in the urine, and experienced no sensation of any passing through the urethra. The patient was free from further attacks for three years, during which time he says he felt no pain in the back. His water gave him no trouble, but he noticed a more or less abundant sediment all this time. This second attack was attended with the same symptoms, but was more prolonged than the first, lasting one week. No blood was observed. A third attack occurred six months later, and for the last four years the patient has never been free from a constant pain, with occasional exacerbations in the left lumbar region. Frequency of micturition, with pain and burning at the end of the penis during the act, now became the rule. Never noticed the passage of a stone or any gritty substance. Deposit has lessened in amount, and no blood has passed to the patient's knowledge. His urine was not examined microscopically. Finding that he was not receiving any benefit from treatment outside he decided to enter the hospital.

Family history excellent. No history of gravel or stone, nor of malignant or tuberculous disease. Patient is a carter, and has enjoyed good health up to and during the intervals of the attacks.

Present condition.—Patient is a well nourished and well developed man, apparently enjoying good health. Sleeps poorly. Complains of pain over the region of the left kidney of a dull, aching character and of constant duration. This pain becomes sharp and lancinating on moving about much. Patient finds that a sitting posture with the knees drawn up relieves him somewhat. No bulging of the affected area is to be observed. On palpation of the abdomen, nothing is elicited beyond that deep pressure

causes intense pain over the left kidney. Heart and lungs are found to be normal. Liver and spleen normal. Lymphatic glands throughout the body are not enlarged. No evidence of scrofulous taint. Bowels are regular. Urine: quantity per diem, 50 ounces, amber in color, acid; specific gravity 1026; very slight trace of albumen; no bile or sugar; amount of urea excreted per diem 350 grains. Patient still suffers from pain and burning at the end of the penis.

After consultation with his colleagues, Dr. Shepherd decided to explore the kidney for stone.

Operation, June 27th.—Dr. Shepherd operated to-day at 2 P.M. The patient was first etherized and an attempt was made to obtain some further information by palpation, but without result. The patient was placed on his right side, with a hard, round pillow under the loins to separate the ribs from the ilium, and an incision was made immediately below the last rib, extending from the edge of the erector spinæ muscle forward and downward for some four inches; the abdominal muscles were cut through and the quadratus muscle reached. This muscle was cut across to give more room. The lumbar fascia was cut through and the kidney easily reached, it appeared perfectly normal. On examination with the finger no stone was felt. A small incision was then made in the lower end of the kidney with a bistoury, and a short-beaked sound introduced through the incision into the pelvis and the calyces carefully explored but without result; the incision bled freely, but the hemorrhage was easily arrested by pressure. The wound was washed out with a weak bichloride solution (1–5000) and brought together with silk sutures except at the posterior end, where a large drain was introduced. The parts were dusted over with iodoform and dressed with washed gauze, and a jute pad and a bandage applied. The patient recovered well from the operation, which occupied only a very short time. At 8 P.M. he complained of a great deal of pain of a tight girdling character.

June 28th.—The dressings being soaked with bloody discharge and urine, fresh ones were applied. The wound looks well and the drainage is good. Passed 19 ozs. of urine in last 24 hours.

Still complains of the same pain as last night. 29*th*—Pain is very severe and of a shooting character; no discharge or urine has come through the dressings; urine 30 ounces per diem. 30*th*—Patient is feeling very comfortable, suffering no pain whatever; the dressings are still quite dry; urine 38½ ounces per diem.

July 2*nd*.—Dressed for the second time; patient sleeps and eats well, suffers no pain; urine passed for the last 24 hours measures 31 ounces, contains deposit of urates and a small quantity of pus, very few blood cells. 7*th*—The wound has healed well. 10*th*—Patient was allowed out on gallery to-day; is feeling well. 25*th*—Patient left the hospital to-day. The wound is entirely healed; no pain has been experienced except on the day before yesterday, when the patient again experienced the pain of a colicky character, which lasted forty-eight hours and suddenly disappeared.

The urine has been collected and thoroughly examined during his stay in hospital, and no stone or gravel has been found. On the whole, the patient feels a great deal better than at the time of his entrance. His temperature on the day after the operation was 100°F. in the morning and 101°F. in the evening; beyond this it never exceeded 99°F.

Patient presented himself at the hospital August 13th. Has had no return of pain since leaving hospital, has gained flesh, and feels well.

Remarks.—This case is a good example of the benefit derived from simple exploration of the kidney, even when no cause can be found for the severe pain. The symptoms in the case which made the existence of stone probable were the severe and sudden attacks of pain, followed by sudden relief, the course of the pain and the after-continuous pain referred to the region of the left kidney; also the severe pain felt on deep pressure over the region of the kidney. The absence of history of pus and blood in the urine was against the diagnosis of stone. However, as the simple cutting down on and exploring the kidney is a comparatively harmless operation, and one which often gives relief when no stone is found, it was decided to give the patient the

benefit of a more immediate examination of the kidney than could be made through the abdominal walls by palpation. The rapid recovery of the patient and the complete healing of the wound without suppuration was satisfactory; also the absence of urine in the dressings after the first day. In cases where the fibrous pelvis of the kidney is incised, a troublesome fistula is nearly always the result, but when the fleshy portion is incised this complication rarely occurs. It was remarkable with what ease the pelvis and calyces of the kidney could be explored with the short-beaked sound, such as is used in exploring a child's bladder. This method of examination was first introduced by Mr. Jordan Lloyd of Leeds.

CASE II.—*Fracture of the Sixth and Seventh Cervical Vertebræ by the handle of a railway hand car. Death in fourteen days.*

John D., aged 25, was admitted to this hospital on July 12th suffering from paralysis of the trunk and lower extremities.

On June 30th last, while sitting upon a hand-car, the patient received a severe blow upon the back of the neck from one of the handles which was moving at a rapid rate. He was knocked off the car, was not stunned, but was unable to get up.

Dr. Williams, of Algoma Mills, who saw him a few hours after the accident, found him quite conscious, but with complete loss of motion, sensation and reflexes below the eighth rib. Sensation over the remainder of the body was intact, but the extensors, pronators and supinators of the upper extremities were paretic. He complained of severe pain over the lower part of the neck and between the shoulders; was able to move his head and neck, though with difficulty and pain. Priapism was present for about nine hours after the injury, and he had retention of urine and fæces for three days.

The temperature remained normal until July 2nd, when it commenced to rise steadily. On evacuating the bladder the urine was found to be ammoniacal with traces of mucus, followed in a few days by much blood and pus. Latterly he has suffered from incontinence of urine and fæces. Temperature reached 102½° on July 7th and 103° on July 10th.

Condition on admission.—Patient is a strong, heavy, well-nourished man; the condition of the patient was as described; pulse 120, respirations 30, temp. 99½° and 103° at 8 p.m. on day of admission; is conscious but drowsy. The patient does not complain of any pain, but of great thirst and distress in breathing. The face is flushed, lips and tongue are dry. Pupils equal and active. Respiration is altogether diaphragmatic. The abdomen is distended and tympanitic. Urine and fæces are voided involuntarily. On passing the catheter about 25 ounces of very foul smelling urine was drawn off, the latter portion of which consisted almost entirely of blood and pus. The lower portion of the sacrum is red and inflamed, and here and there are to be found a number of incipient bed-sores. The skin on malleoli of both legs is congested and appears as if going to slough. There is complete motor and sensory paralysis from the line of the nipples down. The upper extremities are paretic, with exception of the flexor muscles, which are still strong. Sensation in the upper extremities is intact. On pressing upon the lower cervical spines, the patient complains of slight pain. On passing the hand over the spinous processes of the cervical vertebræ an indefinite irregularity is felt, and the spine of the seventh appears to be more prominent than usual. No crepetus can be elicited. On admittance was placed upon a water bed, bed-sores dressed and the head fixed in position. The urine was drawn off three times a day.

July 13th.—Patient is very drowsy, sleeping most of the time. During sleep the respiration is stertorous. Patient can be easily roused, but soon relapses into a semi-comatose condition. Temperature 102°. Rectum was emptied of fæces by means of an enema. *14th.*—Died this morning at 5.30.

On post-mortem examination the lamniæ and bodies of the sixth and seventh cervical vertebræ were found to be fractured into several pieces. In the cord inflammatory softening extended throughout the lower cervical and upper dorsal region. Heart normal. Lungs found to be filled with mucus, and patches here and there of broncho-pneumonia were observed.

UNDER CARE OF DR. FENWICK.

CASE III.—*Suture of Nerves and Tendons at the Wrist Joint.*

Gabriel D., was admitted to this hospital at 8 P.M. on May 2nd last suffering from a large and deep wound opening the right wrist joint, inflicted by a circular saw. The patient was much weakened by loss of blood when first seen by the House Surgeon.

On examination a deep lacerated wound, at the back of the wrist, is found, severing all the extensor tendons of the thumb carpus and fingers. The supinator longus tendon, radial nerve and artery were torn across. The lower ends of the ulna and radius and the proximal line of bones of the carpus were torn and splintered. The flexor tendons and the ulnar artery and nerve were uninjured. At 9 P.M., Dr. Fenwick, assisted by Dr. Shepherd, brought the several tendons and nerves together with fine catgut sutures and fine silk. The arteries were tied with catgut ligature. A quantity of splintered bone and torn ligamentous tissue was removed. The wound was thoroughly irrigated with sublimate solution 1–2000, and edges were brought together with silk. Two drainage tubes were inserted at each end of the wound. The arm was then placed upon a straight splint extending from the elbow to the tips of the fingers and the wound dressed with iodoform gauze and rubber dressing.

May 17th.—Suffers great deal of pain at the tips of the fingers. Temperature 99°. Pain is greater at night, necessitating the administration of morphia. *18th.*—Feels easier. Temperature 100°. *23rd.*—Dressed for the first time to-day; dressings soaked with discharge. Edges of wound united in places. A pocket of pus which had formed in the forearm was opened and drained. Sensation has returned to the back of the hand and fingers, it having been absent in all except the little and uluar side of the ring fingers. Limb was dressed and supported upon an inclined plane, the splint was removed. A great deal of sloughing is taking place in the wound on account of the extensive laceration of tissue. *28th.*—Dressed. Sensation improved; can feel a slight touch of the finger or prick of a pin.

June 5th—Temperature has been very irregular, reaching 101° to 103° at night and falling to normal in the morning. Suffers much pain at night Several collections of pus were opened. Sloughing still continues. Sensation about the same. 8*th*.—Better sensation. Temperature is lower and patient suffers less pain at night. 15*th*.—Dressed. Wound looks much cleaner and healthy granulations are beginning to appear. No pain. Sensation improved. Can extend fingers and thumb slightly. Temperature normal. 21*st*.—Dressed. Has now fair sensation in fingers. Exit to-day. Is to return to the Out-door Department to have his dressings applied.

This patient presented himself at the hospital August 12th. He had fair motion of the fingers, and sensation in the back of hand was quite normal. Stlll two or three sinuses on the line of the wound which lead down to necrosed bone. A day or two ago removed the remains of scaphoid bone.

Reviews and Notices of Books.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I., Surgeon to the National Eye and Ear Infirmary, Ophthalmic Surgeon to the Adelaide Hospital, Dublin, Examiner in Ophthalmic Surgery in the Royal University of Ireland, and to the Conjoint Board of the King and Queen's College of Physicians and Royal College of Surgeons of Ireland. Second edition with illustrations. London: H. K. Lewis, 136 Gower street, W.C. 1888.

This is a handy volume of 438 pages, in twenty-two chapters, the first three of which are devoted to "elementary optics, the physiology of vision, refraction and accommodation and the examination of the eye. These important subjects, though briefly discussed, are placed before the reader in an unusually clear and attractive manner, numerous illustrations being given in elucidation of the text. The diseases and injuries of the eye are treated of in the usual anatomical order, and the author has

succeeded in condensing his material without leaving out anything of practical importance. All the standard operations on the eye are well described, with the addition of recent modifications and improvements. In the operation of extraction of cataract much importance is justly given to the antiseptic precautions which during the last few years have come into general use, and, from a purely surgical standpoint, the book shows abundant evidence that it is the work of a careful and painstaking operator. As a new feature in what is still to be regarded as one of the smaller treatises on ophthlalmology, we notice a chapter devoted to the motion of the pupil in health and disease. This will be of special interest to those who are occupied with neurology. The chapters on diseases of the optic nerve, amblyopia, and amaurosis are also deserving of special mention and will repay perusal. The work is fully up to the times, containing the substance of all acknowledged recent advances in the science of ophthalmology. We cordially recommend it to the student, the practitioner and the specialist.

A Clinical Atlas of Venereal and Skin Diseases, including Diagnosis, Prognosis and Treatment. By ROBERT W. TAYLOR, A.M., M.D., Surgeon to Charity Hospital, New York, and to the Department of Venereal and Skin Diseases of the New York Hospital; Late President of the American Dermatological Association. Illustrated with one hundred and ninety-two figures, many of them of life size, on fifty-eight beautifully colored plates. Also many large and carefully executed engravings throughout the text. Parts I and II—Venereal Diseases. Philadelphia: Lea Brothers & Co.

The first two numbers of this the latest venture of these enterprising publishers are devoted entirely to venereal diseases. Besides numerous illustrations, many of life size and all life-like, Dr. Taylor has added a full text equal in scope to that of almost any of the ordinary treatises on the subject. Each of the figures has a short but very clear description attached, and in some instances also the main clinical features of the case

depicted are given. The work will be completed in eight folio parts, measuring 14×18 inches, and containing, besides the illustrations, altogether about 400 pages of text. The price per part is $2.50, and two parts are to be issued every two months. The atlas will be found invaluable to the teacher, but it should really be in the hands of every general practitioner. Judging from the numbers before us, the work is going to justify the most sanguine expectations entertained regarding it.

Dissolution and Evolution and the Science of Medicine: An Attempt to Co-ordinate the necessary facts of Pathology and to establish the first principles of Treatment. By C. PITFIELD MITCHELL, M.R.C.S., Eng., author of "The Treatment of Wounds as Based on Evolutionary Laws." London: Longmans, Green & Co.; New York; 15 East 16th street. 1888.

This work is professedly an attempt to apply the principles of the synthetic philosophy of Mr. Herbert Spencer to the science and practice of medicine; and though no absolutely new principles are furnished, the work gives evidence of at least the kind of originality that is implied in a successful application. If the philosophy offered is not sufficiently far-reaching, does not take a broad enough survey of the facts, or omits those that have essential bearing, we must credit this under the circumstances to Spencer, and not to the author of this work. The book is divided into three parts, which treat of general disease, special disease and implications respectively, and the author employs recognized authoritative accounts of disease on which to base his own theories. Following Spencer, he believes that the facts of disease, like the other phenomena of nature, may be grouped under the principles of either evolution or dissolution, which are the reverse of one another. They are in some degree synonymous with construction and destruction taken in their literal acceptation. Thus, Dr. Mitchell would rank the phenomena of inflammation under the conception of dissolution. But one asks after reading the explanations given here and elsewhere in the book, Is this view any more than one aspect of

a very complicated subject—a mode of survey only? If we change position, will not the subject appear differently? Does this rank as one of the "eternal verities," and if so in what sense? It is somewhat strange that Spencer should have done more for this age in one respect than any other man in pointing out the limit of human knowledge and in showing that many conceptions, real as we think, attaching to certain terms, are absolutely unthinkable at all, and so tend to make men humble, and at the same time that he should build up a system of philosophy implying almost audacious self-confidence. Will this system stand? That Mr. Spencer will be regarded as one of the greatest intellectual embodiments of this or any other age we have no doubt; but will his explanation of the universe be regarded as other than a splendid but partial view—one of the many sides of truth? Inflammation may be a dissolution, but is it not also from other points of view an evolution. We cannot but believe that there are more things in heaven and earth, medicine included, than is dreamt of in the Spencer-Mitchell philosophy. Notwithstanding there are few recent books that we hail with greater pleasure than this one. As our author well says, "The raw material of medical science grows with an acceleration of rate that gives acuteness to the need of central truths about which facts may be organized." Truly, and we are sometimes tempted to ask, When will medicine be in actuality a science or have a philosophy of its own? If the prevailing leaning to bacteriological investigation opens our eyes to the fact that man is a part of nature and that disease is no entity but a modification of natural function in consequence of the reaction between the organism and the environment, including all the effects of heredity; in other words, if medicine is recognized as a department of biology, as a result of these investigations more than others, as we believe will be the case, then will accrue to the profession a gain above all the immediate and direct profit springing from the bearing of micro-organisms on disease. All honor then to such men as the author of this work, who endeavor to furnish such conceptions as will tend to show us the need of broad generalizations. What is wanted is

some fertilizing idea that will awaken thought in many minds and turn our eyes from the narrowing inspection of isolated groups of facts to broad surveys of Nature as she appears in disordered animals. At present it matters not so much whether the 'central truths' are considered such by all or not; they will beget other and higher ones. There is room for many works on evolution as applied to disease. The subject is as yet in its infancy, and there are but few to notice the infant. No thoughtful unprejudiced man can read such a work as this without being the better. Such views dignify the healing and preventative art and enable man to walk erect in the universe. T. W. M.

The Extra Pharmacopœia, with the additions introduced into the British Pharmacopœia, 1885. By MARTINDALE and WESTCOTT. Fifth edition. London: H. K. Lewis, 135 Gower street, W.C. 1888.

In the three years which have elapsed since the last edition of the "Extra Pharmacopœia" was issued, wonderful strides have been made in therapeutics and pharmacy, and many new remedies, which are proving of great service, have been introduced. Among the latter may be enumerated the important group of antipyretics, namely antipyrin, antifebrin, salol and phenacetin, also saccharin—all derivatives of coal tar. Cardiac remedies have been reinforced by the preparations of strophanthus, sparteine and caffeine. Sal alembroth and the flusoilicate of sodium (Salufer) have been added to the long list of antiseptics. Cocaine and ichthyol—the latest addition to the pharmacopœia of the dermatologist—are also fully described. The authors have added, besides, numerous additional formulæ and have embodied those of the "Unofficial Formulary" of the British Pharmaceutical conference. This little book is full of information and should be in the hands of every general practitioner.

Selections.

A Successful Case of Total Extirpation of the Larynx.—A case in which the whole of the larynx was extirpated for epithelioma was communicated to the meeting of the Victoria Branch of the British Medical Association, on April 25th, 1888. The patient was a man aged 62, a native of Germany, residing at St. Kilda, Victoria, who began to lose his voice in the early part of 1887, when Dr. Cox of Melbourne diagnosed a smooth growth below the left vocal cord, but the patient refused treatment. His voice was regained for about four months, but he again became hoarse, and in September he began to suffer from cough, attacks of spasm, and inability to lie down. Laryngoscopic examination on October 1st showed a small ulcer below the left vocal cord, and Dr. W. Gardner of Adelaide, who happened to be in Melbourne, concurred with Dr. Fox in making the diagnosis of cancer. Dr. Cox then removed with the laryngeal forceps a small portion of the growth, which was examined by Professor Allen, who pronounced it to be epithelioma. On the following day Dr. Gardner, assisted by Drs. Cox and Yorke, removed the whole of the larynx. Next morning the patient almost died of suffocation from blocking of the tracheotomy tube; but Dr. Yorke sucked the tube clear, and restored the patient by performing artificial respiration. After that his progress was uninterrupted. Jelly was taken by the mouth on October 10th; on the next day he was able to get up, and on Christmas Day he was able to go out in the city unattended. The patient attended the meeting of the Branch in excellent health; there were no signs of recurrence of the disease, and he could speak in a whisper intelligibly to those around. An artificial larynx of silver was made for him, but he preferred not to use it. The report published in the *Australian Medical Journal*, May, 1888, contains an addendum by Dr. Gardner, giving his reason for preferring total extirpation as a rule. There are (1) diminished probability of recurrence *in situ;* (2) diminished risk of blood and pus passing down the wound into the trachea, this being prevented by the immediate insertion of a rectangular tube into

the trachea ; (3) greater facility in administering the anæsthetic during the later stage ; (4) scepticism as to the results after partial excision turning out eventually to be so much better as is now said ; (5) diminished risk of perichondritis. In this particular case the disease was so nearly in the middle line that removal of half the larynx was contra-indicated. Examination after removal showed that all the cartilages of the larynx were so completely ossified that to obtain a view of the interior it was necessary to split the organ down both back and front. The growth infiltrated the soft tissues immediately below the left vocal cord, which was itself ulcerated at its posterior part. The growth extended downwards to the lower border of the cricoid cartilage, and was broken down in the centre, leaving a rounded ulcer with hard irregular edges. It may be added that the time occupied by the operation from the commencement of the administration of chloroform was fifty-five minutes, and that the highest temperature after the operation was 100.4°F.—*Brit. Med. Jour.*

Death under Chloroform.—The following particulars of the death of a patient in the Royal Berks Hospital, when under the influence of chloroform, have been forwarded to us by the house-surgeon, Mr. E. Deane, L.R.C.P., etc. The patient was a man aged 26, who was admitted to the hospital on March 13th, 1888, for large urethral calculus, which was extracted successfully by median perineal section, the patient taking chloroform very well. After the operation a small perineal fistula was left, which it was thought desirable to close ; accordingly, on June 29th, the patient having been duly prepared (bowels opened, and allowed no food after breakfast), chloroform was administered by Mr. Deane on a Skinner's inhaler. The patient did not seem to take it well, his breathing being rather bad. In about twenty minutes' time, the operation being nearly completed, the patient was sick, and directly afterwards the pulse stopped. The usual means of resuscitation were adopted without avail for fully half an hour. The total quantity of chloroform used was one ounce. The heart was examined before administration : no valvular disease was detected. At the post-

mortem examination the heart was found perfectly empty, and the muscles thin and flabby. There was no valvular disease, and the other organs were normal.—*Brit. Med. Journal.*

Diphtheria.—Dr. John G. Meachem, in the *Medical Standard*, says: I do not make local applications of silver nitrate or iron persulphate to every case which comes under my care, as I did at one time, since I found that the fright given to many children caused far more injury than the application did good. I have almost entirely abandoned local applications to that class of patients, and now give remedies so often that all indications for local treatment are quite as well filled as they would be probanged or brushed. If patients suffer severe pain, let the location be where it may (and a great proportion of cases in the early stages do so suffer), I always begin with a good full anodyne, for which I prefer Dover's powder if the stomach be in the state to tolerate it, but if not, morphine acetate. If upon the examination of the throat the parts are found highly inflamed, with or without exudation, the patient is put at once upon the following mixture:

℞ Potass. Chlorat. - - ℥i
Tr. Ferri Mur. - - ℥iii
Aquæ Puræ. - - - ℥iv

M. Sig. A teaspoonful every hour in a tablespoonful of warm water, and this is continued for twelve hours, when it is given every two hours.

If the breath be fœtid, the following is alternated with the iron and potash:

℞ Pot. Permanganat. - - grs. iv
Aquæ Dist. - - - ℥i

M. S. From five to twenty drops in a dessert-spoonful of water.

If patients sleep quietly and nicely they are not disturbed for their medicine. This, in my judgment, is a point not sufficiently regarded in the treatment of many diseases of children. I administer stimulants pretty early in diphtheria, for which the alcoholic are preferred, as they are much more easily adminis-

tered than ammonia carbonate, though the latter is no doubt otherwise fully as effective.

Carbolic and alkaline washes and gargles are very useful in patients who have age and sense to use them, and the same may be said of atomizing. All detached portions of exudation should be carefully removed. Forceps and scissors are often required for this work. The terrible fœtor arising from these when decomposed is greatly modified by their removal.

It is always prudent to give two or three doses of quinine every twenty-four hours. For many years I have been very careful about the use of cathartics, since the disease often progresses with double violence after active cathartics. I use only the mildest laxatives. Patients must be constantly and preservingly sustained. Since great difficulty exists in the alimentation of children, concentrated food should be the main reliance. Egg, pure milk, essence and extracts of beef, and the malt preparations, are very good. Malted milk is an excellent and convenient preparation.

Powerful emetics in diphtheritic croup, like copper sulphate, tartar emetic, etc., I have discarded since no permanent good results from their use. My treatment is confined, when emetics are employed at all, entirely to fluid extract of ipecac, the careful and judicious use of which affords great comfort and relief. Mucous collections which gather in the throat are thus dislodged and thrown out which cannot be expelled in any other way, while but little exhaustion follows the action of ipecac.

As convalescence advances, nothing is so useful in bringing back the lost powers of the system as the syrup of iron iodide given in doses of from four to twenty drops in simple syrup three or four times daily. It is an admirable remedy.

The various forms of paralysis consequent on diphtheria are pretty sure to pass away in a few weeks, or at most two or three months. For these cases iron and strychnia with electricity are the only necessary remedies.

Do cases of true diphtheritic croup ever recover? I answer yes; three, and three only, of my patients in such cases have recovered, the last of which was a few weeks ago; all have been

girls, and neither could speak above a whisper for a period of fourteen days. A complete cast of the windpipe was ejected by the last patient, and though considerable exudation occurred after, there was not sufficient to completely shut off the air from the lungs. Another member of the family had diphtheria in a very violent form at the same time, but no croup symptoms. These patients contracted the disease from a cousin who died in less than a week from the appearance of the attack.

Infantile Constipation.—Dr. Edwin B. Shaw, in the *Medical Index*, says :—In cases where there is no deficiency in the biliary and intestinal secretion, but rather a paresis of the muscular fibres of the bowels, I have succeeded admirably with the fluid extract cascara sagrada, or the cascara cordial, but in other cases where the passages were dry and hard, I have failed most signally after a most patient and thorough trial of the drug. In these cases where there is a deficiency of the intestinal juices, I can most heartily commend to the consideration of the profession the small doses of podophyllin. For a babe from nine months to a year old I would prescribe the following, to be used for at least two weeks, and longer if found necessary:

℞ Resinæ podophyl. - - gr. ij
Sacch. lact. - - - ʒss
M. et ft. chart. No. xxxij

Sig.—One at night in a little milk.

The proper dose can be determined by trial. My aim is to produce a soft, easy discharge every day, and let me insist on the importance of *appointing a regular time to have the bowels moved.* Nothing should turn the nurse aside from attention to this most important duty. It is remarkable at what an early age an infant can be taught what it means to be placed on his little chair. I have often known mothers to commence to educate their babes in this direction as early as the fourth month.

Treatment of Warts.—Rœsen (*Münchener Med. Wochen.*) has found the following procedure very serviceable in removing warts and callosities, etc. :—The thickened epidermis

is slightly moistened with an antiseptic solution (boracic or salicylic acid) and then covered with a fairly thick layer of pure crystallized salicylic acid. Over this is placed moist borated lint in four layers, a piece of gutta percha fabric, and a bandage. In the cases of small warts and callosities, the dressing is allowed to remain for five days. On removal it will be found that the thickened tissue is somewhat shrunken and has separated from the subjacent parts, which are covered with perfectly normal skin, presenting no traces of injury or bleeding. The author has never seen any caustic effect from this application on the surrounding and subjacent tissues. If the callosity is of any considerable thickness, as is often seen on the sole of the foot, the dressing should be left in place for ten days, or renewed after five days. The great advantage of this application is that the effects of the salicylic acid are localized to the thickened area.—*Journal Amer. Med. Ass.*

Poisoning from the local use of Cocaine.—Dr. L. G. Broughton, of Reidsville, N.C., reports the following interesting and instructive case in the *North Carolina Med. Journal:*

On July 3rd Miss Ella Frost, a music teacher in our town, was taken with severe toothache, and soon consulted Dr. C. A. Rominger, a most excellent dentist, who placed in her tooth cavity a small piece of cotton upon which he put three drops of a 20 per cent. solution of the muriate of cocaine. Soon afterwards she experienced complete relief of pain, and said she felt "very happy." The pain having been relieved entirely by the cocaine, she went home. Upon her arrival she said to the family that she felt tired and must go to bed. The family were persuaded that, from her appearance, there was something radically wrong, and sent immediately for me. When I arrived, which was in a few moments after she had taken her bed, I found her entirely unconscious, breathing very irregularly, and only twelve to the minute, pulse 47 to the minute, pupil on the right side (side in which the cocaine was used) was very much dilated, tongue drawn to the left side, and the whole system in an extreme

state of relaxation. She responded not at all to a pin which was stuck in her right arm, and all efforts to arouse her sensibility were in vain.

The history having been given me, I at once diagnosed *cocaine poisoning*. Not having seen many accounts of cocaine poisoning I was somewhat at a loss as to what to do, and to some extent was fearful of the termination of the case. I remembered, however, having read only a short while ago in the *Therapeutic Gazette* of a case treated by whiskey, consequently I administered a large quantity of French brandy hypodermically and did not get any benefit. I then gave a large quantity by mouth, and not much good result, but I think some. My next idea was to administer strychnia hypodermically, which I did, using $\frac{1}{100}$ grain, and in a few moments she began to rally, and in two hours was *completely* out from under its influence except a general relaxation, which I think the whiskey helped to produce.

I am satisfied that strychnia is the antidote to cocaine. I know that it was the prime factor in the restoration of this patient. It was a 20 per cent. solution used in this case, which is the strength generally used by dentists. The dentist in this case had used it many times and never had any bad results. I have myself used it many times. Only a short while ago I used the same strength of solution in an operation on the cervix uteri, and was charmed with it. So we may safely say it was idiosyncrasy in this case, but I think it should teach us that it is a dangerous remedy and should be used with extreme care.

There were peculiarities in this case—one was the slow, feeble pulse. I notice in *every* case that I have seen reported the pulse has been quick and fast. I don't know why this was. If any one has had any experience with strychnine in the treatment of conditions of this kind, I should like to have them report it.

Treatment of Eczema.—Mr. J. A. Wetherell says: What is to follow has particular reference to the eczema simplex affecting the fingers and hands. The best procedure, possibly, will be to divide the subject into sections.

1. *Medical Treatment.*—(*a*) External. I dip pieces of lint,

sufficient to surround the fingers separately, in pure liquor carbonis detergens, and apply them, surrounded by gutta-percha tissue, at bedtime. They are allowed to remain on all night. Considerable smarting is at first caused, but it soon disappears. On removing the lint in the morning the skin looks sodden, the former vesicles are often raised into small bullæ, which, however, ere long get absorbed and dry up. During the day the hand is left exposed to the open air, or, better still, kept gloved in thin kid. They are washed every third day with lanolin coal-tar soap. To render the skin more pliable and soft a little lanolin is rubbed in every morning. In the course of three or four days the upper hardened cuticle comes off, in some cases as a whole, in others in large flakes, leaving a clean smooth surface, healthier, with more tonicity in it, and not so subject to undergo the catarrhal multiplication so characteristic of eczema. When much redness or heat exists, or there is an acrid discharge, or the implicated surface is extensive, we may moderate the strength of the alcoholic solution of coal-tar by mixing it with (1–10 or 20) cold water; or the alkaline bathing, to be presently mentioned, may be tried. If there are only a few vesicles, I have often touched them over with a little pure carbolic acid, so as to bring away a mere shell of epidermis of limited area. Let us now briefly review a few of the other local methods adopted. As to ointments—*e.g.*, of bismuth, zinc, etc.—all I have to remark is that they are, like the tar method of Hebra, simply disgusting. Even the lowest menial does not care to parade the streets with his fingers or hand bandaged up with so many white linen rags, to say nothing of the small amount of relief producible. Huile de cade or oleum rusci pyroligneum painted over the parts every day or two will soon dispel an ordinary case; but what about the, to most people, disgusting smell? The treatment, verily, is worse than the disease. Bathing with saline or alkine waters, such as are found at Harrogate, Bath, etc., alternating or combined with the application of spirituous alkaline lotions, I have great faith in, especially where the disease is extensive or there is much exudation—*e.g.*, in eczema rubrum, or the case is intractable to other means. Watering-places and the sea-side,

however, are not always near; nor could the patient always afford to go to them. The various gelatine, collodion, or other impermeable coatings, I consider worthless. (*b*) Internal—Drugs, as such, are not required. To speak of treating the gouty or rheumatic diathesis by colchicum, etc., is simply ridiculous. Such terms as these should, in my opinion, be abolished, or applied only where actual attacks of gout or rheumatism exist or threaten. Should we not rather speak of such as "a constitution with a tendency to excessive formation of uric acid," or even as "uratic." To give large doses of arsenic is sheer waste of material. Very small doses often dispel scaliness; but it should only be administered in the form of some mineral-water, as La Bourboule, Woodhall, etc.

2. *Dietetic Medication.*—Avoid stimulating and indigestible substances, as pickles, tea, etc. In other words, the chief materials of diet should be lean meat, milk, or cocoa to breakfast, old bread, fresh vegetables (except starchy bodies, as potatoes); no pastry. Avoid all that disagrees, especially beer and malt liquors.

3. *General Indications.*—Cleanliness in everything is very essential; clothe and diet the patient according to the changing season; avoid all local irritants; take plenty of fresh air and exercise, and by these means alone regulate the bowels and other emunctories.

In spite of all rules, cases now and then occur which withstand all treatment, baffle every effort, and cling to the sufferer for a lifetime. Such must be attacked on general principles. The plan cannot be a stereotyped one.—*Lancet*, June 2, '88.

The Late Emperor Frederick.—A full report of the post-mortem examination upon the body of the late Emperor Frederick has been published. The macroscopic changes are summarized as follows: Cancerous destruction of the larynx, with secondary disease of a rather large lymphatic gland at the lower part of the left side of the neck, and a cutaneous nodule on the right side near the wound. Œsophagus unaffected. Inflammatory destruction of the upper portion of the windpipe and

the neighboring parts. Numerous bronchiectases, with putrid contents. Near these, broncho-pneumonic suppurating gangrenous patches. The microscopical report signed by Virchow and Waldeyer says:

1. The larger nodule at the base of the epiglottis shows, on the outside, still unchanged mucous membrane with cylinder epithelium, but in the interior, an alveolar structure with epidermoidal contents. The cells of the latter are large and highly developed; concentrically arranged cell-groups were not observed.

2. The cutaneous nodule on the right side of the wound in the neck is covered with extremely attenuated, but otherwise unchanged, epidermis; the cancerous proliferation reaches close to the surface; its chief development is situated in the deeper parts, where, also, here and there, "nests," with a concentric arrangement of cells, occur. Some normal constituents, such as sweat-glands, are to be seen between the cancerous masses.

3. The lymphatic gland on the left side of the neck shows the highest degree of change. The normal structure has disappeared, and is replaced by a loose alveolar tissue, the spaces of which are closely filled with epidermoidal cells having large nuclei; many of these cells possess small, bristle-like fringes (*Burstensaume*).

4. The contents of the bronchial tubes correspond exactly in their composition with the description given by the undersigned Professor Virchow (in his report of May 19th of the present year) on the solid particles found in the expectoration. Moreover, in certain places, a more abundant collection of small, bright fat-globules, like the globules in milk, was observed.

5. In the foci in the lungs were found thick clusters of pus-cells, but no cancer-cells. The natural alveolar structure was still perfectly distinct.—*Medical Record.*

Valuelessness of Iodoform in Tubercle.—Rovsing has made a special study of the action of iodoform on tubercle bacilli, and has come to the conclusion that it is practically worthless as an agent against them. The *Lancet* com-

mentary on the article of Rovsing says that he "has found that the growth of tubercle is in no way retarded by the presence of a very considerable quantity of iodoform. He has more than once inoculated the two eyes of a rabbit with pure and iodoformed tubercle respectively, and has invariably found that the morbid process was communicated to the eye containing the iodoformed tubercle some time before the other was affected, the irritation produced by the iodoform in the tissues appearing to cause them to form a more suitable soil for the development of tubercle than those of the other eye, which were not similarly exposed to irritation."—*St. Louis Med. and Surg. Journal.*

The Treatment of Tension as met with in Surgical Practice.—In a lecture delivered before the Royal College of Surgeons of England, Mr. Thomas Bryant summarized his views as follows :—

1. The pain associated with every form of inflammation of the bone or of the peritoneal covering is due to tension, and the severity of the pain is a fair measure of its intensity.

2. In acute inflammation of the bone or its periosteum, tension is the chief cause of necrosis ; and in the subacute and chronic forms, it is a potent cause of their chronicity, as well as of the destructive changes which, as a rule, follow.

3. The relief of tension, wherever met with, when the result of inflammation, is an important principle of practice which should be always followed. In bone, the principle is most imperative, on account of the difficulties under whioh neutral processes act in that direction, by reason of the absence of elasticity or yielding in bone, and by reason of anatomical arrangements of its vessels which favor blood statis.

4. To relieve tension in the softer tissues of the body, the local application of leeches, local or general venesection, acupuncture, aspiration, punctures and incisions may be requisite ; whereas, to carry out the same practice in endostitis or periostitis, subcutaneous or open incisions down to the bone, and the drilling, trephining or laying open of bone by a saw, may be required, the choice of method having to be determined by the requirements of the individual case.

5. In the early or hyperemic stage of inflammation of bone, before destructive changes have taken place, experience seems clearly to indicate that the relief of tension—as indicated by a dull, aching pain, etc.—by means of drilling or trephining into bone, may arrest the progress of the disease, and help toward a cure by resolution; whereas, in the exceptional cases in which this good result does not take place, suffering is saved and destructive changes are limited.

6. In articular ostitis, of every kind and variety and in every stage, this mode of treatment cannot be too strongly advocated, as tending toward the prevention of joint disease.

7. In acute or chronic abscess of bone, diaphyseal or epiphyseal, the abscess cavity must be opened as any other of the soft parts, drained and dressed in the most appropriate way—the principles of treatment being the same in hard or soft tissue, although they are modified by the anatomical conditions of the parts.—*Medical Press*, July 11, 1888.

Oil of Turpentine as a Hemostatic in Epistaxis —In cases of obstinate epistaxis in which other means had failed, Dr. W. Eurye, of Budapest (*Orrosi Heti Szcuile*, 1887, 12), upon a recommendation in Billroth's *Surgery*, used tampons saturated with oil of turpentine, with surprisingly prompt success. In one case in which the bleeding had continued for eight days and resisted all internal and external measures, threatening acute anæmia, the application of three tampons moistened with oil of turpentine at once permanently checked the hemorrhage. To prevent intense irritation of the nasal mucous membrane it might be well to dilute the oil.—*Medicin. Chirurg. Rundschau.*

Tannin in Dilatation of the Stomach.—Dr. H. Boulland, thinking that tannin—which acts on the retractibility of the mucous membrane, and is at the same time absorbent and antiseptic—might be useful in dilatation of the stomach, has employed it in many cases with success. In cases in which constipation was present, Dr. Boulland ad-

ministered doses of 10 centigrammes (1½ grains) instead of 20 centigrammes (3 grains). By this means the regularity of the bowels was not interfered with, and the dilatation decreased in proportions analogous to those obtained by washing out the stomach. In twenty days, the stomach was reduced nearly to its normal condition. At the same time, the patients took frequent but light meals, chiefly of pasty substances, and no starchy matter. When the dilatation is due to a tumor, tannin does not give better results than other methods. It diminishes mucous secretion, however, and renders the digestion less painful. Dr. Boulland has found the hemostatic properties of tannin equal to those of ergotin and perchloride of iron. In particular he has used it with success in many cases of epistaxis, when all other means had failed.—*British Medical Journal.*

Angina Pectoris.—In illustration of the pathological anatomy of angina pectoris, Dr. Huchard, at a recent meeting of the Société Médicale des Hôpitaux, related the case of a woman, aged 58 years, who was affected with angina pectoris. The examination of the heart established the existence of aortic stricture and insufficiency of action. Antipyrine and digitalis aggravated the state of this patient, who was only relieved by the employment of the iodide of potassium in large doses. As often happens in such cases, this patient died suddenly. At the autopsy was found a dystrophic sclerosis of the myocardium. There existed besides a dilatation of the aorta, a dilatation of the right coronary artery, and a stricture with obliteration of the left coronary artery. Dr. Huchard remarked that this case is interesting in more than one point of view. It is the one hundred and tenth case of angina pectoris in which was found, at the autopsy, a stricture with obliteration of one of the coronary arteries. It furnishes, besides, a remarkable example of what has been termed pseudogastralgic angina, which was exemplified in the patient under notice, as she had for a long time been considered to be affected with ulcer of the stomach, but at the autopsy this organ was found to be perfectly healthy.

The author added that this case is also interesting in a therapeutic point of view, as it proved once more the efficacy of the iodide treatment, which he had for so long a time employed against angina pectoris. What creates the danger, observed Dr. Huchard, is not the pain, nor the paroxysm of angina pectoris in itself ; it is the ischæmia of the myocardium and arterial hypertension. To combat this ischæmia and this hypertension recourse must be had first to the iodides and to trinitrin afterward.—*Paris Letter N. Y. Med. Record.*

Purulent Conjunctivitis of the Newly Born.—Korn (*Arch. f. Gynakologie ; Amer. Jour. of Ophth.*," Nov., 1888) is of the opinion, from his own observations, that the infection of the eyes of babies probably does not take place while they pass through the vagina, but later, and is artificial, and due to unsatisfactory cleansing. In fact, the eyes of the babe are sufficiently protected to make the entrance of mucus into the conjunctival sac almost impossible. Only a face presentation might favor this accident. Hence he thinks it possible to dispense with the nitrate of silver in these cases. The baby is to be washed with water, without paying any attention to a previous cleansing of the parturient mother. The results were equally good with this method, as soon as the nurse became accustomed to scrupulous compliance with the orders. Out of one thousand babies treated in this manner, only 0·4 per cent. were affected during the first four days of life by purulent ophthalmia. In summing up the results of his experiments, he formulates the following propositions: 1. Credé's method of preventing purulent ophthalmia is absolutely certain and trustworthy when applied in the proper manner. 2. The active part in Credé's method is the nitrate of silver, which is a specific against the gonococcus. 3. The infection of the baby's eye with the poison does not take place in the vagina, but always after birth. 4. The most scrupulous cleanliness during birth and the puerperal state is sufficient to reduce the affections of the eyes to a minimum, and most probably can prevent them altogether. 5. The method is very simple and can be learned by any nurse.

The Relative Value of Antipyrin and Antifebrin.—Dr. W. G. Barr, of Bridgport, Illinois, has made a most careful clinical study of these remedies as well as of quinine on himself whilst suffering from neurasthenia complicated with malaria. He thus sums up his experience in the *Therapeutic Gazette*. This table, he says, will suggest the relative use of the two former drugs:—

Antipyrin.	*Antifebrin.*
Lowers the temperature in half an hour.	In an hour or more.
Effects last two hours.	Effects last six hours.
More diaphoretic.	More diuretic.
Depressing after effects.	No after effects.
Cerebral sedative.	Cerebral, vaso-motor and muscular stimulant.
Dose 15 to 30 grains.	Dose 5 to 15 grains.
Tolerance from continued use.	Tolerance from continued use.

FINAL SUMMARY.

Quinine.	*Antipyrin—Antifebrin.*
Is a tonic of marked effect, and its long-continued use in considerable daily doses improves malarial anæmia.	There is good reason to believe that a long-continued use (four to six weeks) of these drugs or any of the aniline products produces a decomposition of the coloring matter of the blood.—*Therapeutic Gazette, Oct.* 1887.
Quinine is antiseptic.	Antifibrin is not antiseptic, while antifebrin seems to be.
Antiperiodic.	Not antiperiodic.
Sedative only in doses so large that the stomach may not tolerate enough to produce the effect.	Analgesic.
Produces deafness.	Does not produce deafness.
Is prophylactic against attacks of true malarial poisoning.	Is not prophylactic against malaria.
Reduces temperature in some forms of malarial fevers, but has little effect in typhoid fevers.	Reduces temperature in all cases of fever.
	Remarkable effects in migraine, and substituting morphia almost entirely.

—*Paper by Dr. R. F. Lewis in N. C. Medical Journal.*

The Treatment of Chronic Diarrhœa.—A correspondent of the *Medical News* sends the following pre-

scription: "Many years ago I suffered severely from that trouble; I considered it incurable. Being in Paris, one of the best physicians there assured me that it could be cured by a diet of racahout, and it was. Afterward I found one could not get the acorn meal that forms the active part, but knowing that its usefulness must depend on the tannin it contains, I tried substituting for it the following:

Powdered Chocolate, pure - -	½ lb.
Rice Flour - - - - - - - -	½ "
Powdered Sugar - - - - - -	½ "
Tannin - - - - - - - - -	½ oz. (120 grs.)

The tannin, or the rest, separately, has little effect. Together they restore the tone of the alimentary canal and nourish as well as cure. One thing is essential, that is long cooking, not less than half an hour. If simply boiled a few minutes, the harsh taste of the tannin is very strong; with a good half hour's cooking that disappears wholly. It is impossible to distinguish the medicine from ordinary broma. I think this has something to do with its curative powers and with the case of digestion by the most irritable stomach. The remedy is too valuable not to be more widely known. The amount to be taken is a teacupful morning and evening at meals."

The Treatment of Serious Forms of Granular Conjunctivitis. — Abadie (*Ann. d'oc.*, Nov.-Dec., 1887) recognizes two factors in the pathogeny of severe granular conjunctivitis: 1, The presence of the microbe; and, 2, the state of the tissue in and on which it develops. The accessory factors are: The state of the adjacent parts, lacrymal passages, palpebral fissure, and the reaction of the general nervous system of the individual. For some time past he has in rebellious cases combined systematically daily scarifications of the conjunctiva with cauterization. If there is great irritation and marked reaction, he begins by applying leeches to the temple. Then he instills a solution of cocaine, and, after anæsthesia has been produced, he makes slight scarifications in the conjunctiva with Desmorres's instru-

ment, beginning usually with the superior *cul-de-sac*. The parts are allowed to bleed freely, and are consequently cauterized with the glycerole of copper. This treatment is repeated daily, and gradually the conjunctiva becomes thinner, less red, more elastic, the pannus gradually disappears, and the infiltration of the underlying and neighboring tissues slowly recedes.

Hot Water in Diseases of the Eye.—Connor (*Centralblatt f. prakt. Augenheilkunde*) recommends baths of hot water as an excellent means of treatment in various disorders of the eye—from simple catarrh and phlyctenulæ to scleritis, iritis, and hyperæmia of the retina. When, with the instillation of a mydriatic, the pupil fails to dilate sufficiently, hot water aids the action; in catarrhal and purulent ophthalmia, it limits the inflammation; in glaucoma and dacryocystitis, it diminishes pain. There are no contraindications to the use of hot water, which acts with varying efficiency according to the method of application The author usually has a drinking glass filled with hot water, the patient so inclining the head that the affected eye is immersed. The water remains warm for a considerable period, so that the eye may be bathed for some time without discomfort.

If one so choose, he may add antiseptics to the water. This method has the advantage over poultices that its execution does not require an expert. The local action may be thus tabulated: 1. Contraction of the blood-vessels of the eye and of contiguous structures; the ophthalmoscope shows the retinal vessels contracted after such a hot bath. 2. The hot water washes away deranged secretions and excretions, and destroys the germs contained; the bacillus of anthrax, for instance, is destroyed by a temperature of 96°F.; many eyes can support a higher temperature. 3. The healing activity of the reparative tissue or protoplasm is stimulated. 4. The hot water acts directly upon certain conditions of muscular weakness or spasm.—*Memorabilien*, July 6, 1888; from *Centralblatt für die gesammate Therapie*, 1888.

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LOCAL ANÆSTHETICS.

When Herr Koller first demonstrated the remarkable properties of cocaine, surgeons naturally exclaimed *eureka*, believing that at last they had come into possession of a safe and efficient anæsthetic for use in minor operations. Nor have they in the main been disappointed. The ophthalmic surgeon and laryngologist have, at any rate, no cause for complaint, because in cocaine their fondest expectations have been realized. All the ordinary operations on the eye are now performed with its assistance, and we have yet to hear of any untoward result following its application in such cases. In operations on the throat and nose more care is required in the employment of the stronger solutions lest absorption through abraded surfaces may take place, but the risks in this connection are not great, and the danger can usually be readily overcome. It is, however, where the drug has to be injected hypodermically and is thus placed beyond the possibility of removal that its dangerous qualities become evident. Thus several cases have been recently reported where fatal syncope followed its employment in this way. The injection of ten minims of a ten per cent. solution into the gum for a tooth extraction caused symptoms of the most alarming kind. It is therefore far from safe in all cases. It is true the susceptibility to the action of the drug is not universal, depending evidently on some idiosyncrasy in the individual himself, but how is it possible to foresee or detect this peculiarity? On this account, therefore, the scope for usefulness of the drug is destined to become limited. Besides, the fact of having to

inject it hypodermically militates seriously against its use, the introduction of the needle often causing as great pain as a moderate incision.

What we want then is some local anæsthetic which, by its mere contact with the skin, will deaden the sensibility of the part so that an incision can be made without pain to the patient. Thus buboes, abscesses of all kinds, whitlows, etc., could be incised, and wens and other small tumors removed without pain or risk to the patient, and with infinite comfort and satisfaction to the surgeon. It may be said that ether and rhigolene spray will answer all these indications, but in our experience they do not. Ether is very inefficient and rhigolene is too dangerous a preparation for every day use.

Some time ago a French surgeon, M. Debobe, noticed that when he applied the chloride of methyl to the skin in the form of spray the cold engendered by its passage from a liquid to a gaseous state induced almost perfect local anæsthesia. Other experimenters have very recently discovered that the spray was not necessary, but that by simply saturating pellets of cotton wool and placing them on the part to be incised or on the seat of pain, as in neuralgia, an actual freezing took place. The skin in a few seconds becomes blanched, indurated, parchment-like, and depressed, allowing of incision, scarification, etc., to be made without sensation. We trust this remarkable property of the chloride of methyl has not been over-estimated, because we see in it a valuable substitute for cocaine in a large class of surgical cases. Very recently, also, another local anæsthetic has been discovered accidentally, namely, helleborein; but it is probably suitable only for ophthalmic practice. The anæsthesia produced by it is said to be of longer duration than that obtained with cocaine.

In fine, there are few subjects of greater interest and importance to the general practitioner, as well as the surgeon, than that of local anæsthesia, and we trust that, with the co-operation of our chemical friends, no time will be lost in finding something that will meet all the indications referred to.

CANADIAN MEDICAL ASSOCIATION.

It is to be hoped that the meeting of this Association, which is to take place in the city of Ottawa on the 12th, 13th and 14th days of the present month, will be numerously attended. The profession of Ontario should especially be well represented, Ottawa being so easy of access. We wish also to see a large contingent from the province of Quebec and the Maritime Provinces. We can hardly expect many of our Manitoba brethern owing to the great distance, although we shall be disappointed if the usual delegation be not present. We regret to notice of late years the almost total absence, from the meetings, of our French-Canadian confreres. This is the cause of considerable regret, not only on account of the loss socially which is thus sustained, but because they have now in their ranks some of the ablest members of the profession in the Dominion, whose contributions to the science of medicine would, we think, be much more widely read and appreciated if they appeared in connection with the transactions of such a general association as that under consideration. We hope to find these gentlemen in force at the coming meeting. The Canadian Medical Association must not be allowed to die of inanition. It is the only means by which, as Canadian physicians, we can keep in touch with each other, and while we wish the various provincial societies every possible success, we trust that in their time of prosperity they will still continue to contribute to the support of the parent Association.

BRITISH MEDICAL ASSOCIATION.

The fifty-sixth annual meeting of this Association was held the other day in Glasgow, under the presidency of Professor Gairdner, of the University of Glasgow, and appears to have been a most successful affair. In an able address, entitled "The Physician as Naturalist," Dr. Gairdner defends the profession from the charge of atheism which is so often hurled against it by the ignorant and bigoted. Speaking of the physician of the future, he thinks that he will be more inclined

than ever to study his Bible, "but he will study it in the spirit of modern scientific freedom and of historical research, not under the influence of mere tradition and ecclesiastical authority. And thus only, as it seems to me, can the reconciliation of science and religion ever be brought about."

The address in medicine was delivered by Dr. Clifford Allbutt "On the Classification of Diseases by means of Comparative Nosology;" that in surgery by Sir George McLeod "On the Progress in Surgery during the last Half Century." These men are both giants in their respective spheres, and their addresses were able and original. But the most remarkable contribution presented on that occasion was undoubtedly a paper or address by Dr. William MacEwen, of the Royal Infirmary, Glasgow, "On the Surgery of the Brain and Spinal Cord." He begins his paper in a modest fashion, with an account of several cases in which the lesions were diagnosed and localized and then exposed by operation, completing this portion of his paper with the following statistical resumé: "Of twenty-one cerebral cases (exclusive of fracture of the skull with brain lesions or other immediate effect of injury) in which operations have been performed by me, there have been three deaths and eighteen recoveries. Of those who died all were *in extremis* when operated on. Two were for abscess of the brain, in one of which the pus had already burst into the lateral venticles; in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which there existed, besides a large subdural cyst over the one hemisphere, extensive softening at the seat of cerebral contusion on the opposite hemisphere, accompanied by œdema of the brain. Of the eighteen who recovered, sixteen are still alive in good health, and most are at work, leaving two who have since died, one eight years after the operation, from Bright's disease, she in the interval being quite well and able to work; the other forty-seven days after the operation, after the abscess was perfectly healed, from an acute attack of tubercular enteritis."

Then follow the reports of six cases in which the cord had been exposed for the relief of paraplegia caused by pressure.

In reference to these cases he remarks: "The spinal membranes and the cord itself can be exposed, and neoplasms and encroachments upon the lumen of the canal may be removed therefrom without unduly hazarding life. Such interference is unsparingly condemned by writers on the subject, their remarks, however, being applied to injuries, as no such operations have hitherto been contemplated in idiopathic cases. They contend that they are full of danger, being difficult, prolonged, and attended with profuse hemorrhage; secondly, that the operation could hardly benefit the patient, and, thirdly, that no one has been able to present a successful case. Each of these points has now lost its validity."

It is said that the address attracted a large audience and that it was received with enthusiastic applause, a hearty vote of thanks being subsequently carried. Our personal estimate of Dr. MacEwen's remarkable ability as a surgeon—made many years ago—is, we are happy to find, at last becoming verified.

—The treatment of wounds by continued irrigation is an old method which is being revived by Mr. Treves of the London Hospital. If our memory serves us, some of the surgeons engaged in the American Civil War were strong advocates of this plan, and practiced it extensively. About ten years ago cases of lacerated wound were constantly treated after this fashion in the Montreal General Hospital. We do not pretend to say that anything like the elaborate apparatus devised by Mr. Treves, for the supply and removal of the water, was in use, nor were the parts subjected to the treatment for the same length of time (several weeks), but it was nevertheless carried out very thoroughly until all inflammatory action had subsided and the granulation process had fairly set in. We have always thought well of the method in appropriate cases, and shall await with interest the results of Mr. Treves' experiments in connection therewith.

—Dr. Lennox Browne uses cocaine now entirely as an anæsthetic when performing tracheotomy, injecting five minims of a ten per cent. solution on each side of the middle line. He thinks

it diminishes hemorrhage during the operation, whereas both ether and chloroform are known to increase it.

—Dr. Gramshaw has had remarkable results in the treatment of typhoid fever by means of the mixture of carbolic acid and iodine. His formula is as follows: Carbolic acid, 12 minims; tincture of iodine, 16 minims; syrup of orange peel and water to eight ounces. Of this mixture he gives an ounce every four hours. Of a total of 116 cases treated in the course of seven years in this way he has had only one death. The good effect of the treatment is said to be manifested early in a fall of temperature, a lowered pulse rate, and a cessation of the diarrhœa. This method of treating typhoid fever has a strong advocate in Dr. George Ross of this city.

Personal.

Dr. W. W. Chalmers, McGill, '88, has settled in the town of Magog, Que., and is doing remarkably well.

Dr. H. D. Fritz, McGill, '88, is at Joggins Mines, Nova Scotia—prospects excellent.

Dr. R. T. Berry, McGill, '88, has made the rising city of Pullman, Ill., his resting place.

Dr. F. Z. Kenney, McGill, '88, thinks there is no place like home, and has consequently begun practice in St. John, N.B.

Dr. C. E. Park, McGill, '88, is evidently of the same opinion, and hence is to be found at Durham, Ont.

Dr. J. D. Flagg, 'McGill, 87, has been recently appointed Demonstrator of Anatomy in the Medical Faculty of the Niagara University of Buffalo. We wish him every success in his new position.

There are no less than three graduates of McGill in the teaching staff of the College of Physicians and Surgeons of Chicago—Dr. L. St. John ('72), Professor of Clinical Surgery; Dr. C. Rutherford ('82), Professor of Anatomy; and Dr. J. B. Loring ('83), Demonstrator of Chemistry.

We regret exceedingly to have to report the death of one of the most promising of McGill medical students—W. L. Hilton ('91), of Montreal. He was drowned by the upsetting of a canoe on Brome Lake on the 22nd ultimo. His companion, Miss Archibald, of Montreal, was also drowned.

Medical Items.

—Jabconski of Poitiers favors the isolation of tubercular patients, and proposes an ordinance excluding consumptive children from the public schools.

—The death of Dr. J. Milner Fothergill removes from English medical society a very prominent figure. He died recently of diabetes, from which he had suffered for many years. He will be best remembered for his interesting and voluminous writings chiefly on the subject of Dietetics.

—There are 16,930 practising physicians in England, a proportion of 1 to every 1642 inhabitants; and an increase in number of 21.7 per cent. since 1881. The largest number is found at Brighton, where there is 1 physician to 727 persons; next comes London with 1 to 939.

—Dr. F. Bramann, first assistant in the University Surgical Clinic, who performed tracheotomy on the late Emperor Frederick, has qualified for the position of *Privatdocent* in the University of Berlin by an inaugural dissertation on "Myotomy and Tenotomy To-day and in the Pre-antiseptic Period."

—The sanitary press is discussing the comparative advantage and disadvantage of having trees near a house. The general conclusion is that no tree should be planted nearer to a house than its own length when full grown. Trees not only moisten the air about them, but the earth also. Sunshine should have access to a house at all times.

—Dr. W. Wylie reports (*Brit. Med. Journal*) a unique case of *entire absence of both mammæ*. The girl, unmarried, 21 years of age, had recently given birth to a healthy male child, and had made an excellent recovery. Her mother had long been aware of the fact that there were no breasts, but stated that she had always enjoyed good health, and had menstruated regularly from the age of 15 years. The nipples were also absent.

—Doctors who wish to report their cases in the journals are compelled to be very careful in France. The Criminal Court of Besançon has recently fined an alienist $100, and compelled him to pay the family $400 damages for having described, under the title, "An observation on rational lunacy" (*folie raisonnante*), a case in such a manner that the identity of the patient was discovered.

—The International Hygiene Society has opened two kiosks for ladies in London. These will afford writing and reading rooms, and two large swimming baths, surrounded by recreation grounds. It is proposed to establish fifty similar places in London for ladies (women?), about one hundred in the city for men, and swimming and shower baths in East London.

—Instead of sponges Billroth uses gauze prepared as follows: The absorbent gauze is cut into pieces eight inches square, and of these seven are folded and sewed at their edges. These are boiled twice in one day, one hour each time, in a sublimate solution of 110 degrees. They are then placed in jars and carefully covered. Gauze thus prepared is thoroughly antiseptic. Every attempt with such gauze to cultivate micro-organisms has failed.—*Bull. Med.*

—An East Indian morning draught called "tiger's milk" is not generally known. Add the beaten yolks of three eggs to two tablespoonfuls of powdered white sugar, three cloves, the rind of half a lemon and half a pint of Imperial Crown brandy. Pour over it a quart of new warm milk, stirring rapidly, and serve immediately. This is recommended for those who live in malarial districts and for delicate persons before breathing the crisp air of autumn or winter. A wineglassfull will be sufficient in this climate.

—A list of Chinese medicines, printed for the use of the customs officers of the Treasury Department, reminds us of the strange pharmacy of the mediæval period in Europe. They are imported chiefly for the use of the Chinese doctors of the Pacific slope, and include such alleged substances as tigers'

bones, rhinosceros' horn, elephants' gall, asses' glue, snake-skins, fowls' gizzards, dried silkworms, crabs' eyes, dragons' teeth, hedge-hogs' skins, fossil crabs, fossil teeth, horse tails, straw, glass, cow hair, Job's tears, "insects of nine smells," puff-balls, ground blood, cows' knees, tree-bugs and centipedes. —*Medical News.*

—An impecunious medical student advertises thus in a Dublin paper: "Matrimony.—Young gentleman reading for the medical profession is desirous of making the acquaintance of a young lady; one with some means preferred; widow not objected to; all communications will be regarded as strictly confidential; enclose carte if convenient."

—English teetotalers received a painful knockdown blow at a meeting held at Lichfield on Tuesday under the auspices of the Church of England Temperance Society. Dr. H. M. Morgan, the principal practitioner in the city, who had been one of the leading lights of temperance and a total abstainer, startled the brethren by announcing that he had changed his views and joined the ranks of moderate drinkers, partly for example and partly for experiment. He had abstained totally for six or seven years, but he had become convinced that his health had suffered thereby. He had consulted many eminent physicians in London and Birmingham, and all had advised him that total abstinence would prove seriously injurious. Now he had gone back to the juice of the grape, and while admiring total abstinence very much in the abstract, he concluded it was not good enough in real life.—*Exchange.*

—The habit of discussing fees is considerably ingrained upon some American physicians. According to Dr. Warren-Bey, the French set a good example in this matter. Nothing, he says, offends a French physician more than an inquiry in regard to his charges for professional services or for money to be directly paid to him. Although at heart extremely solicitous respecting his fees, he considers it *infra dig.* to discuss them, and he expects every client to take a hint from the louis conspicuously displayed upon the mantel-piece, and to add his

quota to them before leaving the room. In consultations it is the duty of the regular physician to obtain the fee—one hundred francs in ordinary medical cases—and then to hand it to the consultant, sealed up in an envelope, in the most quiet manner possible, and never in the presence of the patient or his family. No conversation on the subject is admissible, and the matter is treated as if it were the least important thing in the world. One excellent custom in connection with consultations prevails here: the regular physician, as well as the consultant, receives an extra fee—usually a double one.—*Paris Letter.*

—During the winter session of 1887-88 over three hundred and thirty-five different physicians attended the courses of instruction at the N. Y. Post-Graduate Medical School and Hospital, 226 East 20th street, New York city, an increase of more than 60 per cent. over last year. In the Hospital Department about four hundred operations were performed, all of major importance. To all of these matriculates had access, as the hospital is used solely as a means of clinical instruction. This remarkable increase in the matriculation list has necessitated both larger clinical space and hospital accommodation, so that a new clinical amphitheatre has been erected, and will be used for the first time at the opening of the winter session, September 17th, 1888. A new and commodious laboratory has also been erected and furnished with the latest apparatus for the study of normal and pathological tissues. The nose and throat clinical room has also been enlarged. Professors Abraham Jacobi, Robert F. Weir, Joseph E. Winters, E. Bolton Bangs and Peter A. Callan have been appointed to the Faculty. The sessions of 1888-89 promises to be the most prosperous ever held.—*Com.*

ANODE AND CATHODE.—A writer in *L'Electrothérapie* suggests that it is easy to remember that anode corresponds to the positive pole, and cathode to the negotive pole, if one reflects that the word anode contains an "n," while the word positive does not, and cathode contains no "n," while negative does. That seems to be about as useful as most mnemonic formulæ.

THE GERMAN PHYSICIANS OF THE LATE EMPEROR.—The German Emperor has conferred on Professor von Bergmann the Star and Cross of the Royal Order of Hohenzollern, and on Professors Gerhardt and Schrötter the Order of the Red Eagle (of the second class).

SCIENTIFIC CONGRESSES IN 1889.—In connection with the exposition in Paris in 1889 there will be held international congresses of hydrology and climatology, of hygiene, of dermatology and syphilography, of electricians, of physiology, and of therapeutics. The committees on organizations have been appointed, and it is probable that the names of the officers will be soon announced.

FETID SWEATING OF THE FEET.—The *Kriegs-Sanitas Ordnung* recommends a powder composed of three parts of salicylic acid, ten of starch, and eighty-seven of talc. Five grammes suffice for one application, but this remedy being not always convenient, the Prussian military laws prescribe a salicylic suet (salicylic acid, two parts; mutton suet, 100 parts).—*Archives de Med. et de Pharm. Militaires.*

QUEER REMEDIES.—A correspondent of the *Philadelphia Medical and Surgical Reporter* says that he knows a man in his neighborhood, styling himself a physician, who recommends the following for epilepsy: Take the false tongue of a new-born calf, which, he says, grows under the real tongue during intra-uterine life; dry thoroughly and powder, and give from five to ten grains three times a day.

A MISHAP TO AN AMATEUR DOCTOR.—The newspapers record a somewhat amusing incident that lately happened to a person who tried to bring a man out of an epileptic paroxysm by pouring cold water into his mouth and upon his neck. After a slight struggle, according to the account, the epileptic sank back apparently dead, whereupon the manipulator of the water became intensely anxious and placed his ear at the mouth of the patient, who straightway caught the ear between his teeth and proceeded to chew it until "its beauty had vanished." An ar-

rest on a charge of mayhem followed the epileptic's return to consciousness, but a police justice discharged the prisoner, on the ground that he was not responsible for what he might have done while in a fit.

FOR ECZEMA OF THE ANUS AND GENITALS.—Lustgarten recommends the following ointment in this painful affection:—

Oleate of Cocaine - -	½ to 1 part.
Olive Oil - - - - -	2 parts.
Lanolin - - - - -	10 parts.

M.—Apply this ointment twice a day to the affected part.—*Gazette de Gynécologie*, July 15, 1888.

A NATURAL CUBIC CENTIMETRE MEASURE.—Everyone has at his disposal a cavity, viz., the external auditory meatus, whose cavity is about a cubic centimetre. The right meatus holds a little more than the left, and the capacity increases slightly with the height. The exact average capacity in one hundred men, according to Hummel, is 1.06 c.c.

RATHER SWEEPING.—From the following item, which we find in the last number of *The Quarterly Journal of Inebriety*, it seems evident that in the future there will be few marriages in Kentucky: "A very curious and suggestive bill has been introduced into the Legislature of Kentucky, which prohibits marriage with an idiot, lunatic, pauper, vagrant, tramp, drunkard, gambler, felon, or any person rendered physically helpless or unfit for the marriage relation, or any person with a violent temper, or who has, within one year, been a frequenter of any immoral house."

LOOKING FOR PRACTICE.—The following advertisements from the *London Times* would seem to indicate that the rising young physicians in England are not devoid of ingenuity, even though their self-respect be not great: "A Young Medical Man, of great abilities and high testimonials, is, from want of means, prevented from obtaining a practice. Would any benevolent lady or gentleman of influence assist him by obtaining an appointment or otherwise? Address," etc. "To Philanthro-

pists.—Young Doctor, highest credentials, living West End, will attend, gratis, limited number of patients annually recommended by any philanthropist paying sufficient for rent and taxes."

TREATMENT OF CRACKED NIPPLES.—Cracked nipples are treated with great success by Pinard, as follows: As soon as there are any appearances of cracks, or even tenderness of the nipples, a compress, folded in four and steeped in boracic acid solution, three or four per cent., is applied. Oil silk is placed over the compress to prevent evaporation. Over this a layer of cotton wadding, and the whole secured by a bandage. Another method is that pursued by Monti, who covers the fissures with caoutchouc dissolved in chloroform (traumaticine), and this protects the fissures against the saliva of the infant.

PRESERVATION OF CATGUT LIGATURES.—Prof. Gross is not at all in favor of carbolized oil as a preservative of catgut ligatures, claiming that it merely forms a nidus for germs. He recommends putting the animal ligature in a weak chromic acid solution and glycerine for about a week and then placing in the following mixture until needed:

Alcohol - - - -	15 parts.	
Glycerine - - - -	1 "	
Acid Carbolic - - -	10 per cent.	M.

The placing of the catgut in a 1–1000 corrosive sublimate solution just before using makes it soft and pliable.

A COLLAPSED DRUGGIST.—"I want some consecrated lye," he slowly announced as he entered the store. "You mean concentrated lye," suggested the druggist as he suppressed a smile. "Well, maybe I do. It does nutmeg any difference. It's what I camphur, anyhow. What does it sulphur?" "Eighteen cents a can." "Then you can give me a can." "I never cinnamon who thought himself so witty as you do," said the druggist in a gingerly manner, feeling called upon to do a little punning himself. "Well, that's not bad, either," replied the customer, with syruptitious glance. "I ammonia

novice at the business, though I've soda good many puns that other punsters reaped the credit of. However, I don't care a copperas far as I am concerned, though they ought to be handled without cloves till they wouldn't know what was the madder with them. Perhaps I shouldn't myrrh-myrrh. We had a pleasant time, and I shall caraway—" It was too much for the druggist. He collapsed.—*Detroit Free Press.*—*Medical Herald.*

SIR ANDREW CLARK, M.D., F.R.S.

"Stafford," writing an "Open Letter" to one of the lay newspapers, has the following anent Sir A. Clark, president of the Royal College of Physicians of London :—

It would not be bad business to decoy you away from your consulting room at any given date. and just pocket the pile of guineas under which your *escretoire* may be said to groan daily. It would be an amazingly good haul for an enterprising nobsman, and *entre nous* your banking account must be so beautifully swollen by this time that you would never miss them.

Truly, the general practitioner is but a poor devil when compared with an illustrious specialist like yourself. What are the paltry family bills which are so long in coming in, and of which no careful medico dare press the payment, beside the glittering series of one-pound-ones or two-twos, or even three-threes, as the scale may be, which are actually forced into the luxurious lap of the man who has made the special study of some popular complaint his own? Fancy an ante-chamber crowded with people desirous, and even impatient, to part with their coin! It is better than discovering a petroleum well in one's back garden, or blundering in a Welsh gold mine!

No one can deny that you have won your spurs by constant hard work; and now that you have been on the war-path for about forty years, you have found out that dieting is the best panacea for the fashionable ailings of your aristocratic *clientèle.* You ride your little *liver* hobby-horse, and truly I believe you are right. One half of the failures in life may be attributed to the unconscionable behaviour of the average

organ, so denominated, and any man who appears as the *hepaticus* apostle deserves the gratitude of the whole world—in fact, they should all desire you to be a long-liver.

Like a great many more eminent physicians, you hail from the land o' cakes. Aberdeen is not only your birthplace, but the cradle of your education, and you have managed to wrest as many medals from your national extra-academical Medical School as would gladden even the soul of an enterprising soap-boiler who sends his superfine wares to every possible exhibition.

It was not, however, till 1854, when you joined the Royal College of Physicians, and settled in the metropolis, that you gave a real impetus to the spreading of your reputation, which may be said now to be European.

Among your most distinguished patients, the G. O. M. has perhaps helped you along more than anybody else. Judging as an humble outsider in these matters, I should say that W. E. G. must be one mass of liver, and therefore an admirable subject for your skill. I doubt, however, whether your patching him up, and keeping him jolly and healthy, meets with universal approbation. I should say, on the contrary, that some anti-Home Ruler would be glad of the chance of administering some quiet but efficacious prescription which would promptly remove him from the scenes of political warfare.

Your manner towards those who consult you, unlike your celebrated predecessor, Dr. Abernethy, is sauve, not to say mellifluous. "No coffee, a little cocoa, dry toast, a chop well done or its equivalent, a pint of claret, and no more," is your usual two guinea *formula*, and the delicious air of modest conviction with which you utter the words renders the advice concentrated balm of Gilead to the dyspeptic victim who clamours at your door.

I remember some few years ago the nephew of a well-known statesman called upon you in your professional capacity. The young gentleman had arrived at the stage of suffering when it would be considered imprudent to attack any kind of breakfast except that which one could, so to speak, uncork. "What do you usually drink!" you asked the youthful but fervent admirer of Bacchus. "Brandy and soda, as a rule," replied the ingenious lad. "Ah, every S. and B. you take is like putting a nail in your coffin." "Then," remarked the logical visitor, "my coffin by this time must be entirely made of nails."—*Hospital Gazette.*

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DELIVERED AT THE ANNUAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION, AT OTTAWA, ON THE 12TH SEPTEMBER, 1888.

BY GEORGE ROSS, A.M., M.D., MONTREAL.

Gentlemen:—My first duty is to thank the members of the Canadian Medical Association for the great, and I may add, entirely unsought, honor of being called upon to serve as its President. Having been absent from last year's meeting, my election to this important position at that time was still more a source of surprise, but, nevertheless, of much gratification. If a simple loyalty to this Association as one of the rank and file, and humble efforts to sustain it by regular attendance and an occasional contribution, entitle one to any recognition, I may fairly claim that much. To more than that I lay no claim, and I know it is only the indulgent goodwill of my friends and fellow-members which has procured for me this great honor, one which I can assure them I duly appreciate, and I shall always endeavor to give them no reason to consider their kind confidence misplaced.

He whose duty it is to address officially an important meeting of this kind may well claim to be overwhelmed by an *embarras de richesses*. No restriction is placed upon his choice of a subject, and the field is practically limitless. To select is indeed difficult, and even when that difficulty has been overcome, there

remains the still greater one of so presenting it as to be deserving of your attention. Following after so many eminent predecessors, it is, I can assure you, no false modesty, but a sense of genuine incapacity for the task which has been constantly present with me.

It may not be amiss, on an occasion like the present, to take a hasty survey of the general standing and prospects of the profession in the Dominion, and to consider whether it be progressing as it should. In a young country like this, progress is exceedingly rapid in almost every department of life—in trade and commerce and agriculture—in the building of cities and the opening of great lines of railway, extensive systems of telegraphy, and other public works on a commensurate scale—in the establishment of public schools and the foundation of universities—in the consolidation of the professions and giving them their proper status—and a comparatively few years works changes which are rapid indeed in comparison with the more steady ways of older and more settled parts of the world. When we think that the Confederation, just like this Association of ours, is only even now of age,—that, up to that time, we were but a few weak provinces, with diverse interests, and without any common bond —and that to-day, only twenty-one years later, we are a vigorous and lusty young nation with territories extending across a whole continent and touching on either side the two great oceans of the world, territories with a climate of the most varied and salubrious character, containing vast riches and unbounded possibilities for the present and for future generations—territorries which are rapidly increasing in population by natural increment and by the yearly addition of many thousands of settlers from other lands—when we consider all this, it well concerns us to ask, What has been the record of the medical profession during this time? It has been a time of wonderful activity in all the centres of learning. A time during which an almost entire revolution has been wrought in the science of medicine and in the methods adopted for the teaching of the same. A time during which the keenest minds have been directed to the elucidation of innumerable problems in those sciences

which form the basis of medical doctrine and practice—Anatomy, Physiology, Biology and Chemistry. A time in which the whole practice of surgery has been changed—been based upon principles entirely new, but proved by the severest tests of experience to be founded upon unalterable laws—a change so great that the accomplished student of twenty years ago would find himself to-day committing the most egregious enormities and sinning perpetually against the first elements as now understood. A time in which a generous rivalry has been kept up between the two great departments of Medicine and Surgery, and, great and startling as has been the progress in the latter, it is doubtful if the advances in the former have not been fully equal or even greater. For, whilst Lister and his followers have abundantly shown to the world the enormous importance of what we now call "surgical cleanliness" (a truth till now never properly appreciated), Pasteur, Koch and others have been searching for the true cause and prevention of cholera, hydrophobia, and the other great scourges of mankind. Animalcular life, and its bearing upon the diseases of man and animals, has assumed an importance heretofore undreamt of: and the science of Bacteriology has sprung at once into the forefront as an absorbing pursuit, already fruitful of wonderful results which have opened up a boundless field for investigation, and afford endless scope for observation, thought, and research! A time in which Preventive Medicine has begun to occupy the place to which its importance justly entitles it. Before this period, sanitary science was but in its infancy, sanitary laws were but little understood, and sanitary regulations seldom enforced. Now, the questions of sanitary legislation attract the attention and occupy the minds of the highest statesmanship. The more civilized the country, the more widely is knowledge of public health matters disseminated, the more carefully are statistics collected, the greater the skill and talent exhibited to cope with the difficulties surrounding the sanitary legislator. In fact, there is now no better test of the intelligence and real civilization of a community than an estimation of the attention given to the enforcement of sanitary laws and the degree of diffusion of sound

sanitary knowledge. A time in which the public have begun to appreciate the importance to themselves of having a constant supply of thoroughly educated young medical men—men learned in all the learning of the day—who, scattered throughout the land, may be ready to apply to them in their need all the resources of modern medicine. Wealthy laymen, acting upon this belief, have endowed hospitals and schools of medicine with funds sufficient to enable them to teach medicine as medicine should be taught. Bright examples of this are found in the great gifts to the Johns-Hopkins Hospital and University in Baltimore and the munificent donations to the College of Physicians and Surgeons of New York. The same sentiment doubtless animated the generous donors of the endowment fund to McGill University and the gentleman who has so much enhanced the teaching capability of the University of Toronto. Let us hope that these instances of far-seeing public-spirited and open-handed men giving of their abundance for an object designed to be of service to the whole country will not fail to direct many others towards one way of doing much good in their generation.

It has been a time when the system of medical education has been undergoing a gradual change. The period opens with the old-fashioned medical school—a few professors, a large number of didactic lectures upon a few subjects—practical anatomy being the only branch taught in a truly demonstrative manner—"walking the hospitals" beginning to be supplanted by some clinical teaching. The transition stage is now—the professors are numerous, the didactic lectures are fewer, the subjects taught have multiplied many times, practical anatomy is thoroughly worked up, and the student is obliged to pass through several other laboratories and acquire a practical and personal acquaintance with the other branches of the curriculum. Old-fashioned "walking the hospitals" is a thing of the past, and, instead, the greatest attention is paid to organizing systematic attendance upon the wards, systematic case-taking, and systematic lecturing upon the cases by a special staff. A time during which we have witnessed the development within the profession of a number of specialties. Specialism is an accomplished fact, and on the whole

the profession has been the gainer by its establishment. The advantages of division of work and devotion to one branch of practice are great and obvious, and, I believe, counterbalance to a great extent the objections that are urged against specialism. Like many other systems good in themselves, it is open to abuse, may readily be overdone, or may be cultivated by unworthy members.

Such are a few of the more striking changes which have been accomplished during the time that this Association has been slowly coming of age. At the time of its inauguration, there was much enthusiasm, and all minds were full of the great possibilities for the future from the confederation of the provinces. No narrow or provincial ideas were to be entertained, and all regulations concerning medical education and the practice of medicine, it was expected, would be assimilated for the whole Dominion. This Association started bravely forward on this basis, imbued with the idea that it had a great mission to fulfil. Committees were appointed, and elaborate reports prepared upon "The best means for General Education," upon "A Uniform System of Licenses," upon "Registration and Vital Statistics for the entire Dominion," and upon "A Code of Ethics for the whole Profession." During several years much labor was bestowed upon these subjects, and the greater share of time at the meetings was given to their discussion. It then, however, became apparent to the members that, in devoting their energies to working out schemes for medical legislation, much valuable time was being absorbed, and the results produced were by no means commensurate therewith. The Act of Confederation, by taking away from the Federal authorities the governance of educational matters, left each province free to look after these in its own way. Thus, at the present time, we find a curious complexity of medical legislation in Canada—there being no uniformity amongst the provinces in regard to matriculation, to curriculum, or to qualification for practice.

It is to be hoped that, before long, some arrangement may be come to by which, at least, a Dominion Medical Register may be established at Ottawa, so that, on entry therein, it will be

possible to practice medicine throughout the Dominion. It is, perhaps, possible that this can be effected without prejudice to the functions of the separate official bodies which now govern the medical affairs of the different provinces. In some such way alone can the existing anomalies be remedied, and the present undesirable confusion be removed.

Compare the general condition of the medical profession in Canada with that prior to the time we are speaking of, and, in so doing, look just for a moment at the condition then and now of the leading medical schools of this country. The number of students in attendance was often sufficiently large, perhaps sometimes nearly as large as even in some recent years. The curriculum was by no means short, for it covered four full years, but it was composed almost entirely of didactic lectures and some clinics upon general medicine and surgery. The course was not distinctly graded, but divided only into a primary and a final department. Now, the staff of teachers presents a long array—the subjects are divided up so as to allow each one to devote his attention exclusively to a particular department. Many special departments have been added, and skilled teachers placed in charge. Above all, the importance of laboratory work is fully recognized, and in every year a full share of time and attention is exacted for practical work on the part of every student. Hospitals have been enlarged and extended and the work divided and specialized. Carefully-conducted cliniques are the order of the day, and the material, both interne and externe, is fully utilized for teaching purposes. Summer sessions—some voluntary, some compulsory—have been established at nearly all the schools, and several months of the best kind of teaching is thus placed at the disposal of the student of to-day. The standard of examinations is high, as shown by the percentage of rejections and by the excellent standing so generally attained by Canadian students both at the examinations of our local provincial boards and also abroad. Is it not certain that, with such marked advance in the facilities for sound medical education, the graduates of recent years must be correspondingly more competent and more thoroughly fitted for their important duties than those who preceded them?

In the general profession there have been many evidences of a better condition of things than formerly prevailed—of a greater interest in the scientific side of medicine and a desire not to practice our Art from a purely perfunctory or purely financial point of view. The best evidence of this is the formation of medical societies. These have sprung up on every side—provincial, county and local societies,—and it is most encouraging to observe how actively and energetically many of these are maintained,—good papers read, good discussions held, and a spirit of emulation evinced in correct observation, the thoughtful care of cases, and their systematic and accurate recording. The difficulties encountered in keeping up such societies are often great. Our population is still a mostly scattered one, and members have often to go long distances and sacrifice much time in order to attend: but the gain is worth it all. The best men of every town and every country side will always be found the keenest supporters of their own medical society. Our Canadian physicians, too, are beginning to write more than formerly—not, perhaps, even yet as much or as often as they should—but they maintain medical journals which are alive and active and are a credit to their country and to their contributors. There are now in Canada no less than four English and two French monthly journals, all apparently prosperous. Nor are the contributions of Canadian writers confined to this country. Many of our prominent men are frequent and valued contributors to, and correspondents of, the best of the American journals.

It may be said that, in drawing this comparison between the condition of the profession now and that when this Association began, I have presented an optimistic view and one not altogether warranted by the facts, but I think not so. I believe that, great as has been the progress of science in these years, great as has been the progress of the country in material prosperity, the medical profession may fairly claim that it has not lagged behind: that it has always had such leaders to frame its policy and such earnest and devoted and able men in its schools as have kept it fully abreast of the busy and stirring times in which we live. Has this Association done its share in securing such

a state af things? The programme it laid out for itself at the outset, as I have already shown, was very extensive; it was too extensive for any society to carry out. This was soon perceived, and from the time that the Association got away from the business of framing bills which were never to be enacted, and discussing schemes which came to naught, and settled down to its legitimate work of fostering a scientific spirit in its members, encouraging them to produce good literary work, urging them to original observation, helping them to good understanding amongst themselves, assisting in the maintenance of a high standard of ethics, promoting sociability and good-fellowship—then it succeeded, its meetings were instructive, useful in many ways, and thoroughly enjoyable. It has no feeling of rivalry towards any other society, and I trust none is felt by them towards it. Each has its own sphere of usefulness, and can accomplish its own good ends, without detracting in any way from the necessity for a general reunion of this kind. This Province of Ontario has successfully organized an active and thoroughly admirable society; other of the Provinces have done the same, and it is only a source of regret to many of us from the old Province of Quebec that circumstances have not favored our following their excellent example. This Association, I am convinced, has done much good, and will, I hope, continue to do much more in the years to come. For instance, though failing to carry through such comprehensive measures as were at first contemplated both in educational matters and in matters of State medicine, yet this Association has been again and again occupied in considering the important subject of general hygiene; and, at many of its meetings, the discussions which have taken place and the resolutions passed have aided very materially in promoting such legislation as has been secured bearing upon the public health. Indeed, it must needs be that expressions of opinion from a meeting of the profession representing all sections of the country should command the attention of those who control these matters. The need still existing for further exertions in this direction is emphasized by the lamentable apathy exhibited in so many cases where the public health is in ques-

tion. The etiology of typhoid fever may be said to be pretty thoroughly understood: but, even in the face of violent outbreaks of that disease in some of our Canadian cities, what want of intelligence, and what unwillingness to be governed by competent medical opinion! What incapacity to realize the extent of injury done to the community, the cruel, unnecessary loss of life, with all the suffering attendant thereon! A town near Montreal was recently thus affected to a most alarming extent, diarrhœa was almost universal, typhoid fever was very prevalent and deaths were numerous. The visitation became notorious, and was much commented upon in the press. The facts were amply sufficient to show two things: 1st, That the water supply was contaminated with sewage. 2nd, The manner in which the contamination was effected. Local health board there was none, and the disease for months continued its ravages to such an extent that the locality was shunned by every intelligent traveller, while the poor inhabitants suffered and died. It is a reflection upon the intelligence of the age that such a thing could be, and it is a reflection upon some of our sanitary organizations that no sufficient pressure was exerted to remedy the evil as soon as its cause was fairly determined. It is the duty of every member of this noble profession to render all the assistance in his power towards the furtherance of good and effective legislation bearing upon local and general sanitation, and to aid in the dissemination of sound literature upon hygienic subjects. Many examples similar to the above might be quoted to show that we are yet very far from the position in which we should be, in accordance with the advanced teachings of the present day.

One subject which, it will be observed, from the very foundation of the Association, commanded its attention, and upon which much time and labor has been bestowed by individual members at different times, is that of a Dominion Registration Act. It would be futile at the present day to offer arguments to show the importance of accurate and reliable vital statistics. A good deal has been accomplished in this direction, here and there by local efforts, and in some instances by provincial action, but we are very far indeed from the attainment of that comprehensive

system which this Association decided at its early meetings to endeavor earnestly to obtain. It is, indeed, active members of this Association who have been largely instrumental in educating public opinion on the subject, and in pushing forward such measures of reform as have been reached ; and it is to be hoped that the same members, with many others to assist them, will continue their laudable efforts until much better results are obtained.

The Association adopted a Code of Ethics, and a very good code it is. There is only one point to which I would allude in connection with the attitude of medical men towards each other, and that is with reference to cases of alleged malpractice. Nothing is more injurious to the best interests of the profession than the wretched lawsuits of this kind which are so lamentably common in certain sections of this country—only in certain sections, for I am happy to say that elsewhere they are of very occurrence, and in some favored localities are practically unknown. There can be only one explanation of this striking difference, viz., that such contentions are originated and fomented by unworthy physicians who adopt this means of harassing and and injuring a competitor. Everyone knows that, if medical men were true to each other, these unhappy disputes would hardly ever be begun—that, if rancor and ill-feeling were jealously guarded against and only fair and reasonable opinions expressed, we should not be called upon to witness those painful exhibitions of a house divided against itself. This is a sore blot upon the boasted claims of the medical profession to engender feelings of mutual charity and goodwill. The main remedy for this consists in the cultivation of the true scientific spirit, in keeping up connections with our medical societies, in indulging our natural social tendencies and preserving that natural pride which produces the desire to stand well with our fellows, especially those whose good opinion is worth having. I am sure it is the earnest wish of every member here present that the scandal of these malpractice suits may yearly become fewer in this Canada of ours, to the great advantage of the whole profession.

Again. Has this Association advanced in membership and in influence as it should during the course of these years? As regards the first of these questions, it is not possible to give an answer in figures, for the reason that the method of recording our membership has been very loose; but, on looking at the minutes of the early meetings, it is seen that the attendance was large, and that the distant provinces were extremely well represented. As much cannot be said for the later meetings, at which, though the actual number present has been good, yet the attendance from the maritime provinces is noticed as having greatly fallen off. It is also matter for regret, that our French-Canadian *confrères*, many of whom were amongst the founders, and who came in large numbers to the early gatherings, have gradually ceased attending till, now, a very few only of the more literary-minded and enthusiastic of them unite with us in keeping up our national Association. It may be that the difficulty of using two languages has had something to do with this. I should like to see this difficulty overcome, and the Association strengthened by the hearty support of our brethren from the old Province of Quebec. It should be remembered that, at the International Congress, three languages—French, German and English—were recognized, and a speaker could address the meeting in any of these.

A suggestion made in the presidential address of last year deserves, I think, to be repeated, as no action was taken upon it, and it seems feasible and promises to be useful. It was proposed that a committee might be named to take into consideration a scheme arranging for a closer connection of some kind being brought about between this Association and the various provincial and local societies already in existence. Any suggestion which will add to our membership and increase the interest taken in our work, is worthy of being carefully considered. Without having looked into the question, I am not prepared to say just how this can be accomplished, but, if the meeting think with me in the matter, it will be competent for it to take action in that direction.

Another task which it has been thought suitable for this Asso-

ciation to undertake, and which was fully laid before the meeting last held in this city, was, to bring before the proper authorities the question of medical experts at coroner's inquests. I am not aware that anything was done, though the importance of it was strongly dwelt upon by the reader of the address. The value of such expert evidence would probably be admitted by any educated layman; but we medical men appreciate much more fully the difference between the opinion of the average practitioner and that of a thorough pathologist who is constantly making autopsies and conducting pathological investigations of various kinds: and when we think of the enormous interests so often hanging upon such opinions, we might well consider it a duty to seek some means for skilled evidence being furnished when the object is, to determine the cause of death in a doubtful case.

My predecessor in this chair offered, in his address, some timely advice to his *confrères* upon the necessity for allowing themselves a due amount of recreation at reasonable intervals, and he draws a disheartening, but perfectly true, picture of the results of neglecting this important matter. In accordance with such sound doctrine, I last month rested from my labors and spent twenty days in our Great North-West. There is something particularly attractive to the Eastern city-man in seeing something of the open and free life of our great plains, ranches, mountains and Western coast. Having myself derived much pleasure, profit, and renewed health from this short tour in the Western Provinces, I would say to any of my medical friends who feel jaded or overworked, try the tonic effect of a combination of fresh lake breezes, balmy prairie winds, keen mountain air, and soft ozone draughts from the Pacific Ocean. The variety is charming, and whilst the body is being refreshed and renovated, the mind is being delighted with some of the finest scenery in the world. Upon the route, one spot in particular engages the attention and excites the interest of all medical visitors. I refer to the hot sulphur springs at Banff, which are only now becoming known, and are not nearly as well known as their merits entitle them to be. The springs, as every one is aware, are situated in the heart of the Rocky Mountains,

and in one of the most picturesque parts of that wonderful region. The steaming water, clear as crystal, bursts forth in unlimited quantities high up on a grand mountain side, some four thousand feet above the sea-level. It is strongly sulphurous and its medicinal properties are of a high grade. Such springs are sufficiently rare, there being but two or three of any note even in the whole of the United States, and, most assuredly, none of these possesses the additional attractions of this choice locality—exquisite lofty mountains, affording a surrounding panorama of truly alpine character, and a lovely valley containing a broad blue river which has well been compared to the great Rhone of European fame. The natural attractions of Banff would alone suffice to draw multitudes of pleasure-seekers there, and, as the value of these natural waters becomes more appreciated, it is certain that more and more of our patients will be sent there every year. Apart even from those who would go to drink the waters, there is another class of invalids that I believe could be sent to this high region with the happiest results. The Davos-Platz in Switzerland has been gaining greatly in favor in England and elsewhere as a winter-resort for cases of phthisis in an early stage, and for those who may be looked upon as disposed to tubercular disease on account of family tendencies or defective physique. This resort is high in the Alps, and the winter is rather severe, with an abundance of snow, but there is plenty of sunlight. Necessarily, our information concerning the meteorlogy of Banff is yet extremely deficient, but, from all I could learn, the conditions are very similar to those which have been found to operate so beneficially in the case of Davos-Platz and such-like alpine sanitaria. As there is now an excellent hotel, with every comfort, there is no difficulty as regards accommodation. A proposition has actually been made by some members of this Association that our meeting next year should take place at the Banff Springs, an idea which has much to commend it, but will need to be carefully considered. The Nominating Committee will, as usual, take this matter up and report upon it to the general meeting.

It is often asked, What becomes of all the medical graduates?

Let any of you pass through that enormous extent of fertile country traversed by our transcontinental railroad and observe the villages and towns springing up like magic from one end of it to the other—let him take note of the solid settlement of large areas even away from the beaten track of the railway—let him step off at any station and, more likely than not, he will meet some young *confrère* who is quietly located there and is growing up with the healthy growth of the town or the country-district. The important mines in various parts, the advancing railways, the great ranching posts, require the services of still more medical men, and in connection with some of these are to be found positions of trust and value unsurpassed in the Dominion. In this way can be accounted for a large number of the graduates from the Eastern schools, and it is pleasant to find good opportunities thus opening out for Canadian doctors in their own country.

It is my melancholy duty to have to refer to some distinguished members of our Association who have been called away from amongst us during the past year. Of these, two were from the roll of our former Presidents, viz., Dr. Marsden of Quebec, and Dr. Botsford of St. John, N.B., both original founders, regular attendants, and well worthy of the high honor bestowed upon them. Dr. Marsden was a man of strong individuality and remarkable tenacity of purpose. Taking a lively interest in the affairs of this Association, his opinion and assistance was much valued on account of his long experience and intimate acquaintance with all matters pertaining to the medical profession. His outspoken expressions, and his example of unswerving loyalty to the best interests of the profession, made him a prominent figure at many meetings. An old man of keen intellect and without garrulity, full of anecdotes concerning a now fast-fading generation, Dr. Marsden will long be missed by those who had the good fortune to be intimate with him. Everyone will remember the massive form and fine head of our late friend, Dr. Le Baron Botsford. One of our founders, and imbued with a lively faith in the possibilities for good of this Association, he was always one of the genuine workers, and was eager to assist

in all good works. His greatest delight was to participate in discussion destined to promote correct views about, and legislation upon, public health and state medicine. A very noble, whole-souled gentleman, whose best thoughts and much of whose time were devoted to the good of his fellow-man. Dr. Henry Howard, that kindly and gentle physician—retiring, thoughtful, and given to abstruse metaphysicial enquiries, the best years of whose life were given to the study of mental disease and to the care of the mentally-afflicted. He it was who had the manliness to condemn flagrant abuses in some of our public institutions, and, at the risk of his official position, to call upon a timid government to correct them. For this alone, if for nothing else, his country owes his memory a debt of gratitude. Amongst others, I may mention Dr. Richard Zimmerman, for some time an official of the Association and one of its warmest friends; Dr. John H. McCollom, Dr. W. N. Woodill, and Dr. Brouse, worthy gentlemen all, who worthily served their generation, each in his separate sphere, and reflected credit upon the high calling of the physician.

You have, gentlemen, many and important subjects to engage your attention. I trust that this Ottawa meeting, this coming-of-age meeting, may long be remembered as one at which some good scientific work was done, and something accomplished towards forwarding the general interests of the profession, promoting its dignity, and elevating it in the estimation of the public.

In closing, I should like to say that it is always a great pleasure at these meetings to receive some of our *confrères* from across the line. As members of a sister Association, we give them a hearty welcome, and are glad to have them participate in all our proceedings. Without prejudice to the political leanings of any one, I am sure I express the views of all when I say that in international visiting and in scientific discussion, all we desire is the most absolute "unrestricted reciprocity," and I am equally certain, from what I know of their hospitable character, that our American cousins are correspondingly pleased when we "retaliate" by joining the meetings of the American Association.

MYXŒDEMA—AN ANOMALOUS CASE.*

By John Campbell, M.D., Seaforth, Ont.

Mrs. P. M., aged 66 years, is the mother of a family and a native of England. Fifteen years ago she was attacked with diarrhœa, which proved to be chronic. She had an average of ten stools in the twenty-four hours. These occurred generally from 5 to 10 A.M., and were usually clay-colored. Tried quite a number of doctors and numerous remedies, without any benefit, until about fifteen months ago, when it was got under control. About that time a new symptom began to show itself, which has gone on increasing until the present time. She began to feel hungry every two hours, and unless she got food she felt very weak and tremulous. About six months ago the stools became more solid, but there were still six in the twenty-four hours, and these were of a light clay color. About this time also she noticed the following symptoms, which have gradually become more marked as time passed: (1) She was swollen all over the body, but especially about the face. (2) The mouth was dry, the speech husky, and the taste sometimes sweet, at other times bitter. (3) She felt an inability to pronounce the words properly—they ran into one another. (4) When there was no food in the stomach there was a gurgling noise, heard or felt by the patient herself. (5) She had hungry spells every two hours, when profuse perspiration would suddenly break out; when she took nourishment the sweating would as suddenly disappear. (6) She felt weak and tired, and there was an awkwardness in all her movements. (7) If she did not get food when the hungry feeling and sense of weakness came on, she would tremble, and would be unable to sit up in bed. (8) She sleeps soundly, but awakens every two hours; if she sleeps longer than that time, she awakens hungry and weak, and with the trembling mentioned, all of which disappear shortly after taking a glass of milk, beef tea, raw eggs, or any nourishment either in the liquid or solid form. She observed that liquid food in combination with a stimulant, as milk and brandy, answered particularly well.

* Read by title at the recent meeting of the Canadian Medical Association.

(9) She has difficulty in standing, and has to be supported while dressing. She cannot balance herself on one foot, and is slow in altering her position. (10) Some eight months ago she noticed that her teeth began to decay, and since then five teeth have broken to pieces or dropped out. (11) The patient also noticed a peculiar dryness and crispness of the hair, which is now well marked. (12) Patient frequently complained of a chilly sensation. She had pain about the heart, but it has latterly passed away. (13) Patient had observed that the skin was shiny and of an ashy color. She did not complain of thirst, nor had she noticed any flushing of the cheeks nor pink streaks over the malar prominences.

All the foregoing symptoms were observed by the patient herself, who is an educated and intelligent woman.

Examination.—Examined the patient on the 22nd of June last, on the 3rd of July, on the 12th July, and on the 9th of August, as well as upon several other occasions, and found the symptoms as follows: Found patient in bed, with a normal pulse and temperature. She had a swollen appearance, and was anæmic. The skin had a waxy hue, and was evidently thickened over the whole body. The face had a cheerful aspect. She answered the questions put to her with slight hesitation, but said that she could not collect her thoughts as well as she used to do. Said she took a good deal longer in writing a letter on account of the slowness with which the ideas came. When asked about the length of time she had been sick, she paused about a minute to think what time of the year we were in, then answered the question. She could see and hear well enough. The swelling was resilient. There was slight pitting on pressure on the feet at first visit, but this afterwards passed away. Both upper and lower eyelids were alike swollen, as also were both lips. The hungry spell came on during one of the examinations, and a profuse perspiration broke out. We observed no swelling of the lower triangle of the neck. Paræsthesia was well marked. Could find no evidence whatever of a thyroid gland. The tongue had marks of the teeth upon it, and was flabby and unhealthy in appearance, and evidently somewhat enlarged. The nails

were long and coarse, and we were told that they grew fast. The muscles of the abdomen were large and flabby, which, with the thickened skin, made it difficult for us to examine the liver and other internal organs in a satisfactory manner. The liver, however, seemed to be diminished in size. The stomach appeared to be tender to the touch, but how much of this tenderness was due to the hyperæsthesia of the skin we could not determine. The tendo-patellar reflex was exaggerated. She passes the usual quantity of urine, which we tested several times with the following result: June 21st—Urine slightly acid, dark color; specific gravity 1030; no albumen. July 9th—Reaction slightly acid, color light; specific gravity 1030; no albumen; no sugar. The patient's hands were swollen and the fingers spade-like. The temperature on both sides of the body was identical.

I have not been able to find out any hereditary or other cause for the disease. At my last visit, on Aug. 28th, found Mrs. M. much weaker, though the swelling had very much diminished, and the thickened skin could be easily pinched up. The hungry spells recurred regularly every hour, day and night, consequently she has to be fed twenty-four times in the day. If one hour was omitted, the patient suffered severely from the weakness, trembling and sweating. The pulse was much weaker. The diarrhœa was by no means troublesome. She complained of the slowness of thought; her memory also was much impaired. She had no pain. Hearing was impaired since last examination. She could not stand now. The tongue was somewhat coated, and the patient had been troubled with vomiting, which for the time had ceased. She was low-spirited. The disease is evidently making steady, but slow progress.

Treatment.—The patient has been on tonic treatment for more than a year, taking such medicines as iron, arsenic, and sometimes strychnine. On July 21st she was put upon jaborandi in addition, taking forty drops of the fluid extract three times a day. Since that time the swelling has diminished considerably, as already indicated, the girth of the body being over six inches less than it was. The dryness of the mouth has pretty much passed away under the influence of the drug. To the sweating

and salivation caused by the jaborandi is to be attributed the diminution in the size of the body. The skin is no longer firm, tense, and waxy as it was, but soft and pliable. It, however, retains the feeling of hypertrophy when pinched up. The weakness is more pronounced, as we have seen, and the interval between the hungry spells is shortened. Our case is somewhat anomalous as regards the ravenous appetite, which we have not found described by any author we have consulted. There can be no difference of opinion as to the termination of the case.

SOME REMARKS ON PENETRATING WOUNDS OF THE EYEBALL.

By Frank Buller, M.D.,
Professor of Ophthalmology, McGill University.

(*Paper read before the Canadian Medical Association, at Ottawa, September*, 1888.)

Accidental penetrating wounds of the eyeball are liable to prove disastrous in three principal ways:

(1) From the immediate destructive character of the injury.

(2) From the consecutive inflammatory reaction.

(3) From extension of the latter to the other eye.

With the first of these factors the ophthalmic surgeon has nothing to do, but with the second and third his responsibility may be grave in the extreme. Notwithstanding the well-known rules of procedure in the management of injuries to the eye, none but the expert can justly appreciate the difficulties and dangers that now and then require to be faced. For my own part, many years' experience have impressed me more and more with one important fact; that is, the paramount importance of immediate attention to this class of injuries. I have no statistics to offer, but I am quite sure the lack of prompt and suitable treatment is the chief element in the disastrous results so often seen to follow comparatively unimportant injuries.

I do not propose to take up the whole subject of traumatic lesions of the eye, but will confine my remarks to penetrating wounds in what is known as the ciliary region—that is, a zone of the eyeball bounded in front by the cornea and behind by the posterior extremities of the ciliary processes. The breadth of this

zone is about five or six millimetres. It has been called the dangerous region, from the belief that wounds of this part were particularly liable to be followed by sympathetic ophthalmia. With certain reservations the designation may be accepted, inasmuch as the vast majority of sympathetic ophthalmias are associated with cyclitic trouble in the exciting eye. On the other hand, it is undoubtedly true that wounds in this region are often not followed by any serious consequences, even when left to the *vis medicatrix natura*. I have seen extensive ruptures of the eyeball from excessive violence in this region recover with fairly good vision, without any surgical interference whatever. Such a favorable result, however, can only be regarded as exceptional. On the other hand, comparatively trivial injuries in this locality are not infrequently followed by loss of vision in one or both eyes. If the injury has involved the lens to the extent of causing traumatic cataract, there is always considerable risk of disastrous complications. Under these circumstances, a more or less protracted irido-cyclitis, with all its attendant dangers, may be unavoidable.

Clean cut wounds, either with or without traumatic cataract, are, as a rule, much more amenable to treatment than are lacerations or injuries inflicted with blunt objects which tear and bruise the part injured; here, in addition to the unfavorable nature of the wound itself, the whole eyeball is more likely to have suffered greater violence, besides which, septic or irritating substances are more likely to lodge in the wound or inside the eyeball when the penetrating wound has been effected in this way. This observation affords a natural indication in the management of all wounds in the ciliary region.

Whenever such a wound, whether clean cut or lacerated, is allowed to heal with any portion of the uveal structures entangled in the scleral aperture, there is a serious risk of consecutive irido-cyclitis and of sympathetic ophthalmia. It is for this reason that immediate attention, if possible, within a few hours after the injury, is almost indispensable to success. Every ophthalmic surgeon of any considerable experience has seen many cases of sympathetic ophthalmia which could have been prevented by proper attention to the original lesion.

I believe all authorities on injuries of the eye agree in advising the restoration or removal of a prolapsed iris when this structure is found entangled in the wound; any prolapse of the ciliary body, they say, should be cut off. As far as it goes, this advice is sound enough, though too often in practice sadly neglected; but in regard to entanglement of portions of the ciliary body, the recommendation is, in my opinion, much too vague. I hold that the edges of the wound should be completely freed of uvea throughout its extent; this can often only be accomplished by separating the edges of the wound, and with fine scissors and forceps clearing away all the uvea from its inner surface so that the bare and clean sclerotic can be brought into accurate coaptation with one or more fine sutures. This is a procedure I have repeatedly carried out, and always with the most satisfactory results, but to be effectual, it should be done early, within twenty-four hours of the injury. The usual antiseptic precautions are, of course, observed prior to and during the operation, and, indeed, for two or three days after. The wound by this time will have healed, and the continued use of antiseptics is then hardly necessary.

In stitching the sclerotic, I sometimes pass the needle through its whole thickness, but it answers just as well to go less deeply; in any case, a fine and exceedingly sharp needle should be used. The so-called Hagadorn's needle is the best. The silk sutures may be of the finest. I always use No. 1 for this purpose. After the operation of cleaning and uniting the scleral wound in this way there is apt to be a pretty sharp inflammatory reaction; but this can be controlled by iced compresses soaked in a weak solution of perchloride and changed frequently. This treatment should be commenced as soon after the operation as the eye begins to become painful, and should be continued until all reaction has ceased: three or four days will usually suffice. Atropine instillations and the internal use of antipyrin are accessory measures of some value.

Some ten years ago I reported a case of complete recovery after an extensive wound involving cornea, iris, sclerotic and ciliary body. Figure 1 represents the position and extent of

the wound inflicted by the bursting of a soda-water bottle. There was a clean cut through the inner edge of the cornea, thence upwards and backwards through the ciliary region. There was

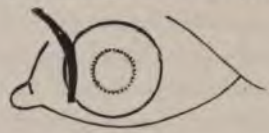

FIGURE 1.

no injury of the lens, but some vitreous had escaped, and both iris and corresponding portion of the ciliary body were prolapsed and engaged in the wound. These being thoroughly cleared away, two stitches were inserted, one at the sclero-corneal juncture, the other about four millimetres further back. These secured good coaptation of the scleral edges. A perfect recovery ensued, and the eye maintained a normal appearance, with the exception of the large iridectomy inwards. Vision being nearly perfect when an acquired myopic astigmatism was corrected with a suitable concave cylinder glass.

Two other cases of quite recent occurrence are also good illustrations of the same class of injury. Figure 2 is that of an

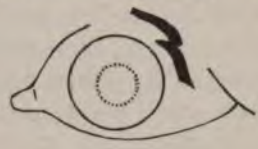

FIGURE 2.

eye which I treated a few weeks ago for a long wound across the upper and outer part of the ciliary region, likewise a bottle accident. There was a long jagged wound through the upper eyelid, and a similar wound in the sclerotic, more than half an inch in length. Much of the vitreous had escaped. The anterior chamber was filled with blood, and the eye had a collapsed appearance. Owing to the lateness of the hour repair of the wound was delayed until the following day. One stitch sufficed to unite the scleral edges sufficiently closely. For about a week there was pretty severe reaction, which finally yielded to the antiphlogistic measures already mentioned, and at the end of

two weeks the eye presented a normal appearance, with the exception of a little congestion at the seat of injury. Only a narrow blue line marking the course of the wound. Vision improving rapidly as the blood in the vitreous chamber becomes absorbed.

Figure 3 is that of an eye penetrated by a sharp-pointed

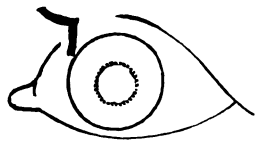

FIGURE 3.

fragment of glass two weeks ago. There was a clean-cut triangular wound in the ciliary region, much vitreous had escaped, and a great deal of blood was effused in the eye, so that there was only quantative perception of light. Iris and lens were strongly retracted. The patient was destitute of self-control, and an anæsthetic had to be administered in order to repair the wound as already described. One stitch at the apex of the triangle sufficed to bring the clean scleral edges into perfect coaptation. The reaction was quite severe for two days, but the constant application of iced compresses allayed all undue inflammatory symptoms in three or four days. Now the external appearance of the eye is perfectly normal. There is no trace of irritation, and the vision is improving so much that fingers can be counted with the wounded eye at two feet distance.

Quite small, clean cut wounds in the anterior part of the eye are only likely to be serious when complicated with traumatic cataract, if at, or very close to the corneal margin, there may be an entanglement of iris, which must be dealt with on the principles already quoted, either replacement or removal; when situated further back, such small wounds are best managed by non-interference.

Lacerated and punctured wounds inflicted by large or blunt-pointed objects should be treated on the same principles as incised wounds, and an endeavor made to coapt clean scleral surfaces. To accomplish this, a certain amount of trimming of the

scleral wound may be necessary, even at the expense sometimes of enlarging the aperture somewhat; but when every possible precaution has been taken with this class of wounds, most of them will go wrong in one of two ways—either an acute suppurative panophthalmitis will speedily extinguish the flickering ray of hope, or an equally unfortunate termination will occur through the slower but more insidious and dangerous ravages of a chronic iridocyclitis, leaving a shrunken and sensitive eyeball, with a choice between sympathetic ophthalmia or some preventive operation which at best may leave a maimed and sightless eyeball.

A CASE OF PENETRATING WOUND OF THE ABDOMEN, WITH PROTRUSION OF THE OMENTUM.

By Francis J. Shepherd, M.D.,
Surgeon to the Montreal General Hospital.

The following case is of interest, as showing how a penetrating wound of the abdomen, with no wound of the intestines, may proceed to a favorable termination, without either local or general reaction:—

George H., aged 11, a small-sized but healthy-looking boy, was admitted into the General Hospital, July 6th, 1888, suffering from a penetrating wound of the abdomen. The boy states that some hours previously, while attending to his duties in a file factory, he accidentally fell forward on some files which were standing upright in a shallow vessel half filled with lime-water. He says the sharp end of one of the files penetrated his abdomen to a distance of four inches, being prevented from going further by the side of the vessel in which it was standing. On recovering himself, he found the file sticking into his abdomen. He withdrew it slowly, and following the file came what he thought was bowel, which had become attached to the roughened surface of the file. A local practitioner was called and endeavored ineffectually to reduce the parts protruded. The ambulance was then sent for and brought him to hospital. On his arrival at the hospital I was called, and found the boy in very good con-

dition, but suffering acutely from pain at the seat of injury. The house surgeon had applied a towel soaked in 1–40 of carbolic acid to the part, and removing this, a small, irregular wound was seen in the median line, two inches below the umbilicus, from which protruded a portion of omentum the size of a walnut. This was of a dark color and much congested. The boy was placed under chloroform, and after washing the protruded omentum thoroughly with 1–1000 of bichloride, an attempt was made to reduce it, but without effect. The wound was enlarged and it was seen that its direction was upwards under the skin to the umbilicus, where it penetrated the abdominal wall. An incision some two inches long was now made through the wall of the abdomen and the omentum returned; the presenting bowel was examined, but as there was no evidence of wound of the intestine the parts were closed with three silk sutures which penetrated the whole thickness of the abdominal wall. The boy had considerable vomiting after the chloroform, but next day was feeling very well and hungry. He was ordered to have nothing by the mouth for two days except pieces of ice to quench his thirst, but I found afterwards that a patient in the next bed had been secretly sharing his milk with the boy from the morning following the operation. There was no elevation of temperature, and with the exception of a little tympanites on the third day, the patient felt no ill results from his accident. The wound healed by first intention, and at the end of the sixth day the stitches were removed. The boy was up and about at the end of a week, and was discharged from hospital perfectly well in a fortnight. He was seen quite recently and was perfectly well. His bowels, which were constipated for some days after the operation, were moved by small and frequent doses (every two hours) of Epsom salts; this relieved the tympanites in a very short time. The direction of the file was very oblique, and it did not penetrate the abdomen until it had passed upwards under the skin for two inches; this will account for the escape of the intestines. The file was a perfectly clean and new one.

Retrospect Department.

QUARTERLY RETROSPECT OF OBSTETRICS.

PREPARED BY J. C. CAMERON, M.D.,
Professor of Obstetrics, McGill University; Physician-Accoucheur to the Montreal Maternity, &c.

Cæsarian Section compared with Induction of Premature Labor, Version, and Craniotomy.—Professor Leopold and his assistants, Drs. Korn, Löhmann and Präger, have recently published* the statistics of the Dresden clinic for the past four years and reviewed their experience of the various methods of treatment in contraction of the pelvis. Dr. Korn relates 45 cases in which premature labor was induced, with the following results:

In 35, the mothers recovered without fever.
" 9, the temperature rose for two to three days.
" 1, death occurred from sepsis.

Korn thinks that labor should be induced between the thirty-second and thirty-sixth week in cases of

Simple flat pelvis with a conjugate up to $2\frac{3}{4}$ in. (7 cm.)
Generally contracted, - - - - - 3 in. (7.6 cm.)

Craniotomy was performed 71 times, and Präger says that when done with strict antiseptic precautions, it is less dangerous than Cæsarian section, and gives far better results.

Leopold analyses his 23 cases of Cæsarian section performed during the past four years. He admits that the operation is essentially a laparotomy, and always a serious matter even for an experienced surgeon. He recommends early resort to craniotomy, if all the conditions necessary for a safe Cæsarian section operation are not present.

The results in Dresden may be tabulated as follows:

	MATERNAL MORTALITY.	FŒTAL MORTALITY.
Induced labor, - - - -	2.2 per cent.	33.3 per cent.
Turning and Extraction,	4.8 "	41 "
Craniotomy, - - - - -	2.8 "	100 "
Cæsarian section, - - -	8.6 "	13 "

* Der Kaiserschnitt und seine Stellung zur Künstlichen Frühgeburt, Wendung, und Perforation bei engem Becken.

Septicæmia was the cause of maternal death after

Induced labor in - - - - - - -	2.2 per cent.
Turning followed by perforation, -	0.0 "
Perforation, - - - - - - - -	0.0 "
Cæsarian section, - - - - - -	4.3 "

Wyder of Berlin (*Archiv f. Gyn.*, Band xxxii, Hft. 1) makes a similar comparison from a review of 9,000 cases of labor at the Charité and 6,000 at the Policlinic. His investigations show the relative mortality of the different operations in Berlin to be—

Cæsarian section, - - - - - - - - - - -	17.9 per cent.
Craniotomy, in moderate contraction of the pelvis,	8.4 "
" in extreme " (5.5–7 cm.)	0.0 "
Induced labor, in moderate " of the pelvis,	5.3 "
" " in extreme " "	0.0 "

The mortality of Sänger's operation is, according to Wyder,

2.13 times as great as craniotomy.
3.37 " " induced labor.
7.1 " " " " in highly contracted pelves.

In formulating rules for practice, he holds that Cæsarian section is indicated in cases of extreme contraction of the pelvis if the patient is far advanced in pregnancy, but that in the early months the induction of premature labor is to be preferred. In pelves with a conjugate of $2\frac{1}{2}$–$2\frac{3}{4}$ in. (6.4–7 cm.), Cæsarian section and craniotomy are direct rivals, the former offering a smaller fœtal mortality at the expense of greatly increased maternal risk.

Ahlfeld publishes the statistics of the Marburg obstetrical clinic for the past year (*Deutsche Med. Woch.*) The expectant plan of treatment seems to be in vogue at Marburg. Notwithstanding one case of spondylolisthesis, three of marked rickety pelvis, and a number of the simple flat pelvis, the operations were very few. In the total 308 cases, forceps were used only three times, podalic version three times, cephalic version three times, combined podalic version twice, Cæsarian section once. In the treatment of the placenta the expectant plan was employed. After the birth of the child, the patient was allowed

to lie quiet for an hour and a half, the bladder was then emptied and the placenta got away. In 39 cases it came spontaneously, in 260 a little gentle pressure from above sufficed to expel it, and in only three cases was Credé's manipulation required. Ahlfeld says that post-partum hemorrhage has been almost entirely abolished since Credé's method has been discontinued as a routine practice ; but then it must be remembered that Ahlfeld is the bitter and uncompromising opponent of Credé.

A New Antiseptic.—Mr. Robson of Leeds (*Brit. Med. Jour.*) proposes the silico-fluoride of soda as a substitute for corrosive sublimate in surgical and obstetrical practice. At the Manchester meeting of the British Association in 1887, Mr. Thomson, F.R.S., called attention to the remarkable antiseptic properties of the neutral fluorides of sodium, potassium and ammonium, and their fluo-silicates. He found that a saturated solution of fluo-silicate of soda (containing .61 per cent.) had greater antiseptic power for animal tissue than a sublimate solution of 1×500. The great objections to the use of corrosive sublimate in surgical and obstetrical practice are that it roughens and cracks the hands, corrodes steel instruments, and is liable to be absorbed and produce toxic effects. Robson has used with marked success solutions of the silico-fluoride of soda (20 grs. to pint) for general surgical work, for vaginal douching, and as a uterine douche after curetting. For washing out the peritoneal cavity after laparotomy, he thinks 10 grs. to the pint quite sufficient. The following are his conclusions :

1. The powder is unsuitable for application to raw surfaces, being very irritating and even caustic.

2. A solution of one grain to the ounce of water is strong enough for ordinary purposes, unirritating to the hands or patient, and an efficient antiseptic. A solution of 10–20 grains to the pint may be safely used to syringe out closed cavities, even where the fluid does not all return. It acts on the glaze of porcelain after long use, and corrodes steel instruments, but does not affect sponges. Its action upon steel is much diminished by adding a little sod. bicarb. to the solution. It is an efficient deodoriser of the hands, and is specially useful when there is

reason to fear absorption. A comfortable and efficient antiseptic poultice may be made by soaking absorbent cotton in a solution (10 grs. to pint), wringing it out and applying it covered with gutta-percha tissue. To deodorise the hands, a saturated solution may be required. It is known commercially as *salufer*, and is put up in tablets (40 grs. each). I have used this preparation for some months, and am quite satisfied with it, the only discomfort being that it discolors the nails.

Puerperal Ischuria.—At the second congress of the German Gynæcological Society held at Halle in May last, Schatz of Rostoch read a paper upon this subject (*Cent. f. Gyn.*, Bd. xii, S. 394). Retention of urine during the first few days of the puerperal period is quite a common occurrence. Several times passing a catheter is all that is usually required, and the patient generally regains control in a couple of days, but not always. As cystitis is very apt to follow the use of the catheter, Schatz disapproves of repeated catheterisings, and recommends dilatation of the urethra instead. One dilatation is usually sufficient. He has practised this treatment for ten years, and has had remarkable success with it. Battlehner (Carlsruhe) uses a 10 per cent. solution of cocaine in these cases. Skutsch (Jena) believes that the trouble arises from pregnant women not learning to pass urine in the dorsal position, and suggests that before labor they should be taught to urinate in that position. He supports his theory by a reference to 42 consecutive cases; 29 of these had learned before labor to urinate in the dorsal position, and after labor 21 urinated spontaneously, 7 had to be catheterized the first day, and 1 the second day. Of the 13 who had not learned, 5 urinated spontaneously, and 8 had to be catheterised, 6 the first day, 1 for five days, and 1 for two weeks.

Remarkable Fecundity—Quadruplets, Quintuplets, Sextuplets, and Septuplets.—The *British Medical Journal* quotes from the *Bund* of May 10 the case of a Swiss woman, aged 38, living near Lugano, who was delivered of six living children, all of whom died a few hours after their birth. It was her second pregnancy, and from the outset she had suffered severely from weakness in the legs and vomiting, and by the fourth month her

abdomen was almost as large as if at full term. On the morning of the 115th day of her pregnancy, while doing some light outdoor work, a considerable hemorrhage occurred, and labor was completed in six or seven hours. There was only one placenta. The fœtal heads were relatively large, the eyes covered with the pupillary membrane, and the genital organs perfectly differentiated. The specimen is preserved in the museum of the obstetrical school at Milan. The Castagnola district is remarkable for multiple births, the proportion of twins being 1 in 45 instead of 1 in 89 (Schrœder), and of triplets 1 in 228 instead of 1 in 7910.

This case immediately called forth a rival story in the *Berner Volkszeitung*, which is claimed to be reliable. A woman of Fullenbach was delivered of seven living children, and as the nearest church was seven miles away, the children had to be carried thither to be christened. On the way, one of them was accidentally lost, whereupon the distracted father made a vow that if the lost child was found alive he would erect a chapel to the Virgin Mary on the self-same spot. The child was found unharmed on the left bank of the Aar, near the Aarburg bridge, and there the chapel stands to the present day.

From France comes the report of another rival case. A woman named Aumont, residing at St. Julie de Varaville, gave birth to five children, three on the 4th and two on the 5th of June last. There were four boys and one girl, and they lived for several days. Madame Aumont bore eleven children in four confinements; the first time one daughter, the second time two daughters, the third time three sons, the fourth time four sons and one daughter.

Portsmouth, England, furnishes another case. Mrs. Norman, the wife of a painter, recently gave birth to four children, three boys and one girl, of whom only the girl survives. Like the Swiss and French mothers, she shows a marked tendency to multiple birth, having previously borne twins and triplets. Unfortunately, in none of these cases has an examination been made to determine the condition of the uterus.

Extrauterine Gestation treated by Abdominal Section.—Dr.

Hermann reports a case (*Brit. Med. Journal*) which is remarkable in several particulars. The patient, aged 26, had menstruated regularly since her fifteenth year, was married at eighteen, and bore two children, the labors being easy and rapid. No miscarriages. From December, 1885, to March, 1886, she was in hospital for a pelvic swelling to the left and behind the uterus, which was either a dilated tube, pelvic hæmatocele, or ruptured extrauterine pregnancy. This pelvic swelling remained stationary for a month, then gradually became smaller, harder, and less convex, and menstruation returned, having been absent for eleven weeks altogether. She enjoyed good health and menstruated regularly till October, 1887, from which time she saw nothing till 25th December, when a copious flow appeared. About that time she began to feel pain in micturating, and during January there was pain in the back and lower portion of the abdomen on the right side, so severe as to confine her to bed. Her appetite failed and she often felt faint. When admitted to hospital on 9th February she was able to walk to and from the examination couch. The abdomen was tender on pressure, and a round swelling was found rising out of the pelvis and extending almost up to the umbilicus. Per vaginam, the cervix was found pushed upwards, with a large rounded swelling behind it, feeling like a retroverted gravid uterus. The sound passed 3½ inches in the normal direction. A distinct uterine souffle was heard over the abdominal swelling. The next morning she was suddenly seized with violent abdominal pain, collapse, and the usual signs of internal hemorrhage. Preparations were made for abdominal section, and 2½ hours after the first symptoms Dr. Hermann extracted a four months fœtus which was lying free in the abdominal cavity. After the clots were all cleared out, the placenta, which was mainly attached to the right tube, was removed along with the ovary. The abdomen was washed and drained, and the patient made a good recovery, leaving hospital on 30th March. The points of note in this case are—(1) The lateness of the rupture, at the fourth instead of the third month, as is usually the case. (2) The presence of the uterine souffle, which is so rare as to be claimed by some

as diagnostic of uterine pregnancy. (3) The operation was done during primary collapse from the first hemorrhage instead of waiting for reaction. (4) The apparent succession of extra-uterine pregnancy, first in the left tube and then in the right.

Multiple Hydatid Cysts.—Pinard reports a case (*Annales de Gyn.*) of multiple hydatid cysts springing from the liver, involving the whole abdominal cavity, extending down into the pelvis, and displacing upwards the pregnant uterus. The waters came away early and the head presented, but could not enter the brim on account of the tumor. The nature of the tumor was not evident; it did not fluctuate, but felt like a fibrous tumor somewhat softened by pregnancy, the patient having been ten days in labor. An exploratory puncture was made into the tumor with a large trochar, and three pints of liquid drawn off; half an hour afterwards a living child was born, but the mother died on the fourth day. At the autopsy, the cysts springing from the liver were found to have attached themselves to the abdominal wall, intestine and omentum, and to have dipped down into the posterior cul-de-sac and pushed in between the folds of the broad ligament. The cyst attached to the liver was as large as a fœtal head, those adherent to the bowel and abdominal wall were about the size of an orange. The case is of great interest, for it is very rare to find hydatid cysts causing dystocia.

Treatment of Congenital Weakness in the New-born.—Budin (*La Semaine Médicale*) gives an interesting description of Tarnier's method of treatment by the incubator and forcible feeding. His first *couveuse* (incubator) was constructed in 1880, and has been in constant use since November 1881. A smaller and more convenient model was adopted in 1883. By means of an automatic regulator a constant temperature of 85°–98°F. (30° to 37°C.) is maintained, and the air is renewed so thoroughly that it does not become heavy or confined. The younger and feebler the child the more heat it requires. It is swathed in cotton wool, because beneath the wool the temperature is about two to three degrees higher than that of the surrounding air, and if by any accident the temperature of the *couveuse* be allowed to fall, the ill effect upon the child would be minimised. Every

hour or two the lid is raised and the child taken out and fed, care being taken not to expose it to the air of the room any longer than necessary. The artificial incubation is kept up usually for one or two weeks, exceptionally for thirty or forty days. As long as it suffers from congenital debility, it generally remains voluntarily in the incubator and sleeps almost continuously, but as it gets stronger it begins to cry when put back into the box, and ceases when taken out. Before it is permanently removed from the incubator, the precaution is taken to lower the temperature gradually to that of the room in which the child is to be. Infants born at full time, but suffering from cyanosis, œdema, etc., are put in for twenty-four hours, and then they do very well. In 1877–80, before the *couveuse*, 181 children died in the Maternité from scleroma; from 1882–5, with the *couveuse*, there were only nine deaths from this cause.

Some infants are so weak that they cannot nurse or cannot even swallow milk put into their mouths with a spoon. Since 1884 Tarnier has practised methodical artificial feeding (gavage). The same kind of tube that is used for an adult, only smaller, is passed into the stomach and milk allowed to flow in; when sufficient has been administered the tube is withdrawn rapidly to prevent regurgitation. The amount and number of feedings depend upon the age and strength of the child; when very feeble about one-fourth to one-third of an ounce is given every hour. Breast-milk is preferred, and failing that, asses' milk. When the child gets a little stronger gavage is alternated with nursing (mixed gavage); gavage should be continued two or three times daily, even if the child is able to nurse well, if the nutrition does not keep up without it. Many interesting and important physiological questions crop up in this connection. What is the proper temperature for a six month's child? What is the condition of the digestive tract and of the lungs between the sixth and seventh month? At what time is the pulmonary apparatus able to allow breathing sufficient for æration of the blood? What is the capacity of the stomach at that period? What is the structure of its walls and glands? What is the development of the salivary glands?

The results of treatment by the couveuse and gavage have been remarkable; before 1881 no six months children were saved, but with the new treatment they have managed to save at the Maternité—

Of six months children,	30	per cent.	instead of	0.0.	
" seven "	"	63.6	"	"	39.
" eight "	"	85.7	"		
" eight and a half,	95.	"			

Such results as these have an important bearing upon the Cæsarian section controversy. In Germany the tendency now is to perform Cæsarian section even in very moderate contraction of the pelvis; in France, the tendency is to avoid Cæsarian section by provoking premature labor. Tarnier's method has really pushed back the date of viability from the seventh to the sixth month, and has thereby greatly enlarged the domain of induced labor and contracted that of Cæsarian section. Budin predicts that with further improvements in Tarnier's method, the induction of premature labor will eventually triumph over Cæsarian section in all cases but those of extreme pelvic contraction.

REPORT ON THE PRACTICE OF MEDICINE.

By R. L. MacDonnell, M.D.,
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Uræmia.*

Uræmia may be defined as the altered condition of health caused by the accumulation within the body of poisonous principles which ought to be eliminated by the kidneys. The symptoms of this altered condition are various in themselves and variously combined. Thus after apparently similar degrees of suppression or diminution of urine, some patients have only violent and persistent vomiting, the brain remaining clear; others have this with diarrhœa superadded, and others, again, become comotose. Convulsions, delirium, asthmatic attacks come and go in seemingly capricious fashion. Traube first attempted to comprehend within one general theory all these

* The Bradshawe Lecture on Uræmia, delivered before the Royal College of Physicians, August, 1888, by William Carter, M.D., B.Sc., LL.B., Lond., F.R.C.P., Lond.

differences. The nervous symptoms are due to cerebral anæmia, and never occurred without preceding cardiac hypertrophy and blood dilution. "Heightened blood pressure caused cerebral œdema, which in its turn caused cerebral anæmia, and as this affected one or other portion of the brain, there would be a preponderance of either coma or convulsions, these last being limited if the anæmia was limited, general if it were general." On this theory could be explained the transitory character of the phenomena. But the theory is too exclusive. Uræmia can be present without any hypertrophy of the left ventricle, and those who had seen this occur rejected Traube's theory. The question as to whether the blood in uræmia is or is not watery has never been determined. Dr. Carter examined the brain in two cases of uræmia. In the first case, one of scarlatinal nephritis, "twenty grammes, partly of white and partly of gray matter, were taken from the middle lobe, carefully dried for forty-eight hours at 82°C. over sulphuric acid, then pulverized and dried again in a similar manner until weight was no longer lost." The proportions of water to solids were almost exactly those of normal brain substance. The brain in the second case was examined in an exactly similar manner to that just mentioned, "when the proportion of solid matter was found to be decidedly greater than in the normal organ, the percentages being 74.55 liquid and 25.45 solid."

Œdema of the brain, therefore, cannot be said to be the cause of uræmia in all cases. Traube's theory ought to be considered in the light of certain experimental facts when the modification of it adopted by Jaccoud and some eminent physicians in our own country will seem far from unreasonable. These experiments, carried out by Raymond and M. G. E. Bernard, consisted in the deprivation of a cerebral hemisphere of vaso-motor supply by incision, in the rabbit, of one of the inferior cervical ganglia. The resulting convulsions were unilateral, affecting the half of the body opposite the operation. Yet the only difference observable between the hemispheres *post-mortem* was that one of them appeared to be affected with very slight œdema. Whether it was the scarcely noticeable œdema caused by this dilatation, as

M. Raymond thinks, that determined the unilateral convulsions or the larger amount of poison which the dilated vessels allowed to act on one side of the brain, yet the facts remain that the convulsions were unilateral, and that they were on the side opposite to the hemisphere whose vessels must have been dilated. It is not improbable that vascular spasms in the brain may occur in Bright's diseases since we know that they occur in other parts where the pallor produced is plainly visible.

The lecturer then deals with two important points in connection with uræmia. The first is as to the supposed utility of dropsy to the Brightic and the danger of precipitating uræmic convulsions, etc., by any rapid reabsorption of the presumedly toxic dropsical fluid. Dr. Carter quotes Bartel's case, where a violent storm of nervous symptoms broke over a patient whose dropsy was rapidly disappearing, as he lay streaming with perspiration in a blanket pack after half an hour's immersion in a bath at 102.5°F. The explanation that this result was due to reabsorption is open to much doubt, for the following reasons, namely, that the rapid absorption of such fluids often takes place without inconvenience ; that convulsions not infrequently come on during the very height of the supposed conservative dropsy, and that (if the patient is not jaundiced or very feverish) the fluids themselves, when examined, appear to be simple, both as regards their organic and inorganic contents. As the rapid relief of dropsy is often a matter of some moment, it will be unfortunate if a doubt is cast upon the propriety of promoting it by all legitimate means. A case similar to that of Bartel's is related, but Dr. Carter adopts a different explanation. The nervous symptoms were due less to the reabsorption of poisonous fluids than to the induction by the heat of the bath in one already half way towards uræmia, of great arterial tension and excitement (a condition of cerebral vessels comparable to that on one side of the brain of Raymond's and Bernard's rabbits), and increased bodily temperature. Since that time Dr. Carter has made it a point of practice to have both the pulse and temperature carefully watched, and if either rises much or headache occurs before perspiration is induced, to have the bath at once

withdrawn and the surface of the skin sponged with tepid water or vinegar and water before it is re-employed.

As regards the second point, Dr. Carter relates an instructive case. He was requested to see a boy of 10 who, on the twenty-first day of scarlatina, and while very dropsical, had suddenly become convulsed. Three other children of the family had died with convulsions in the third week. There was extreme anæmia and œdema. The hot-air bath was used, followed by a purgative and diaphoretics. The sweating was profuse. By degrees the œdema and the convulsions disappeared and eventually complete recovery ensued. "If dropsy were so conservative, and the absorption of dropsical fluid so poisonous as it is sometimes said to be, the fates of those children ought to have been reversed."

As to the composition of the effused fluids, it is altogether unproved and not a little improbable that they are poisonous. The amount of urea and salts is relatively small, even when the vomited matters have been rich in the former substance.

Next, the lecturer directs attention, as a fact influencing if not causing some of the symptoms of uræmia, to the progressively diminished alkalinity, if not towards the end, the actual acidity of the blood, which occurs in some cases.

The facts put in evidence are such as follow: Subcutaneous effusions, effusions into serous cavities, and purulent secretions are, under ordinary circumstances, alkaline or neutral. In Bright's disease, on the other hand, they are frequently strongly acid. In one of the cases mentioned, thin pus collected from large superficial bullæ in a patient uræmic from post-scarlatinal nephritis was always found to be "very acid." Fluid from the chest in the same case was "decidedly acid." In two other cases, serum from the pleural cavity was found to be acid. In one case where death took place very rapidly from uræmia in a young diabetic who had been ill only three weeks, this acidity extended to the blood itself.

The experimental methods of investigating uræmia have, so far, done no more than show us the causes of the difficulties which have hitherto prevented the proper understanding of the

pathogeny of this complex affection. One of the best contributors was that of MM. Feltz and Ritter. The conclusion was that the only really toxic constituents in the urines of health were the potassium salts. Among the organic constituents urea was found to be least harmful. But urea, though harmless by itself, under the influence of ferments, however, it is easily and often decomposed within the bladder, and more easily still in the laboratory, one of the products being carbonate of ammonia. On this fact was based the theory that uræmia depended on decomposition of urea within the blood and the consequent impregnation of that fluid with the poison thus necessarily formed.

"The probability is that uræmia has many causes, this one among them; and that every theory that has been advanced may have some measure of truth and some applicability to particular cases."

The relations, if any, between putrefactive changes and the chemical reactions of living tissues have yet to be clearly established. In the process of decomposition of muscular tissue (Gauthier and Etard) a stage is reached where, coincidently with the dissolution of the muscle structure proper, ammonia is evolved and fixed, and volatile alkaloids of various kinds are formed. Whether these chemical facts have any bearing on clinical facts time will show. Dr. Carter cites a very remarkable fatal case of uræmia in a patient of 52, in whom the symptoms were obscure, death occurring suddenly by collapse. The exhalations of the body of this patient appeared to be of a poisonous nature, bearing out the opinion that a chemical poison was at work.

The results of the experimental researches of Bouchard are quoted. The sources of toxicity of the urine are fourfold, namely: (1) Aliments, and more especially their potassium compounds; (2) the absorbed products of intestinal putrefactions; (3) secretions, such as the bile, saliva, etc.; and (4) tissue degenerations. By careful injection into the veins of different animals, Bouchard established such facts as the following—namely, that the urine secreted during the night differs

from that of the day, not only in degree, but in nature of its toxicity, the former being mainly convulsive in its action, the latter coma producing; that of one part of the day differs from that of another; that the night urine, though specifically heavier, is less poisonous than that of the day; that hard work in the open air markedly diminishes the toxicity, while a mere passing indisposition, indicated by no more serious symptoms than a transient feeling of weariness, markedly increases it; that within the limits of ordinary health, it varies with the degree of cerebral activity, the presence or absence of constipation, and innumerable other circumstances until lately thought to be of little importance; that the several constituents are not only different from, but to some extent antagonistic to, each other.

The presence of seven distinct toxic substances was determined, combined together in the most variable proportions under different circumstances, of which two were convulsivant (one of the two being either the coloring matter or contained in it), one (probably urea) diuretic, one narcotic, one sialogogue, one pupil contracting and one temperature reducing.

Urinary poisons may have very different effects, according to the times and circumstances of their formation. The cause of uræmia does not persist, for it may, and does, differ from hour to hour.

The remainder of the lecture is devoted to consideration of the treatment based upon the above-mentioned principles.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

CASE I.—*Pelvic Cellulitis ending in high abscess. Operation.*—Aged 29 years, married two years. Was confined on the 11th of April last. Three weeks after confinement she caught cold and experienced chills, high temperature, and a pain in left inguinal region. She was admitted into hospital on the 18th of May, complaining of extreme prostration, frequently recurring chills, rapid heart action, and high temperature remittent in character.

Examination per vaginam elicited very little information. There was some deep-seated induration felt high up in the region of the left broad ligament, with some slight fixity of the parts generally to that side. The bases of the broad ligaments, however, were quite free from exudation. Fluctuation was shortly afterwards discovered in the left iliac region parallel to the inner side of Poupart's ligament.

June 2nd.—An incision was made over the most prominent part of the abscess and one pint of very fœtid pus removed. On examination of the pus cavity it was found that the fluid had pushed its way through the abdominal muscles and passed along upwards and downwards for some distance beneath the adipose layer of covering. The bottom of this cavity was found to be formed in the upper part of the broad ligament. A drainage-tube was inserted and the wound dressed with sublimate jute cushion. *9th.*—Tube withdrawn and cavity packed with iodoform gauze. *28th.*—Gauze dispensed with.

July 5th.—Wound almost closed. *8th.*—Patient discharged well enough to be sent to the Convalescent Home at Murray Bay.

Parametrial inflammation following the puerperal process and ending in abscess formation is not at all uncommon, but in the large majority of such cases, arising as they generally do from a cervical laceration becoming infected from without, the whole base of that infected ligament and the parametral tissue extending around the cervix become very soon one solid mass of exudation, depressing the pelvic floor. This inflammation may extend to the base of the other ligament, and in this way the whole pelvic floor becomes depressed. In these cases, should abscess formation set in, fluctuation can generally be felt first through the vagina or rectum. My hospital case, however, exhibited no such features; there was no pelvic floor induration and suppuration took place at the apex, not the base of the broad ligament. It thence followed the course of least resistance, the shortest path to the external surface. These rare terminations of puerperal pelvic inflammations do not, I think, arise from cervical infection, but probably from infection origi-

nating higher up in the genital tract: as, for instance, the placental site or adjacent endometrium. The poison in such cases would be more likely to miss the connective tissue in the lower base of the broad ligament and infect that in the upper zone of the pelvis. As the exudate suppurates it strips the peritoneum from the sides of the pelvis and abdominal wall. It often perforates the fascia of abdominal muscles and burrows beneath the integument; or it may follow the round ligament and appear at the external inguinal opening.

This is the second case within a short time I have reported where the pus made its way through the abdominal muscles to the surface. Imlach of Liverpool has reported cases in which the pus followed the course of the round ligament through the inguinal canal. This rare termination of abscess of the parametrium must be distinguished from abscess of the perimetrium resulting from suppuration in a diseased ovary. The latter always invades, by extension of inflammation, the Fallopian tubes, intestines, and adjacent structures. Such indurations are not felt by lifting up the pelvic floor except when the bimanual method with considerable force is used; and they have some other features in common with those of the case I have related. The broad distinguishing point, however, lies in the fact that abscess of the parametrium follows parturition, while abscess of the perimetrium occurs in virgins and the sterile.

CASE II.—*Pelvic Cellulitis before Puberty, ending in extensive abscess formation. Operation.*—Was admitted to the hospital May 9th with the following history: She has never menstruated; has been in fair health, although delicate from birth, until March last, when she complained of pain in the lower part of abdomen at times, and began to emaciate and lose health generally. Three weeks before admission to hospital she was suddenly seized with severe colicky pain in the right side of abdomen. This pain continued for about twenty-four hours, after which it moderated, but would again recur at varying intervals. During this period of time she experienced so-called chills and fever; she began to lose her appetite and rapidly to

emaciate. Bowels have been constipated as a rule, but the night following her admission had six stools; the evacuations were of a purely mucoid character, and accompanied with much pain and rectal tenesmus. Temperature on admission, 98.5°F.; pulse 112. Functions of bladder and kidneys normal.

Examination.—A soft, fluctuating, fully distended cystic tumor situated in the centre of abdomen and extending from pubis to umbilicus was observable. Its origin was from the pelvis, had gradually extended upwards, and had throughout occupied the middle line. Patient states that she had not noticed the enlargement until within three weeks past, but the childlike simplicity of the patient rendered this statement rather valueless in the history of its formation. On palpation, the tumor was somewhat tender, especially at the upper limit, near the umbilicus. The contents seemed somewhat easily displaceable from side to side, and its walls were evidently very thin. Percussion note dull throughout area of tumor, and clear note on each side and in flanks. Auscultation nil.

The vaginal examination proved very interesting. The fluid contents of the tumor could be made to fluctuate by external pressure upon the finger in the vagina as low down on the posterior wall as midway between the fornix and the vulva, thus separating the recto-vaginal connective tissue fascia to this extent. The fluid also seemed to extend on either side of the vagina along up the pelvic walls and end in a large oval-shaped tumor rising out of the pelvis into the abdominal cavity. The parts were virginal, though the vaginal walls were soft and distensible. The cervix was high up and seemed crushed against the pubic bone; the os looked backward, and its lips were normal. I passed a sound into the cavity of the uterus, which measured 5 cm., and seemed normal in condition and anteflexed.

The question arose, What was the nature of the fluid in the sac, and where was it anatomically situated? As regards the fluid, it was either gradually effused blood or a large hæmatoma, or pus. As there was not direct evidence in the history of the case to point to blood effusion, it was in all probability a large post-uterine retro-peritoneal pus collection dissecting the peri-

toneum from the pelvic walls and lifting itself in the direction of least resistance—the anterior abdominal wall. The fact of it being so peculiarly palpatable, so low down in the recto-vaginal septum, where the connective tissue is so very loose, and the fluctuation wave passing on either side in the direction of the peritoneal reflection seemed to locate the fluid as being outside the peritoneal cavity. I passed an aspirator needle through the posterior fornix and pus began to flow at once. The needle was withdrawn and a bistoury passed in its track, making a fair sized opening, which was still further enlarged by a uterine dilator. From this opening a pint and a half of very fœtid pus flowed. I curetted the cavity thoroughly, removing large quantities of granulation tissue, and inserted a T-shaped drainage-tube. The little patient improved from this out, her temperature rising occasionally a degree above normal at night. Five weeks after the operation the drainage-tube was removed, but it was found that within the next thirty-six hours the temperature rose up to 104°F. Patient was now placed under ether and the cavity found to contain a large quantity of fœtid pus which had collected since removal of tube. The cavity was again thoroughly curetted with the sharp instrument and the tube reinserted. A few days after this operation the patient was allowed to leave her bed and walk out on the gallery of the hospital. Three weeks was now allowed to elapse, during which time the discharge from the cavity became markedly less every other day. At the end of this period the tube was removed and the cavity found to be only $1\frac{3}{4}$ inches in depth. It was, however, thought better to again use the curette, which brought away a considerable quantity of granulation tissue; tube again reinserted just to within the cavity.

During the following ten days there had been no discharge, and the tube was finally removed (20th July). The patient remained in the hospital for some days, and no evidence of further collection showing itself, she was sent to her home.

The interesting points in the above case touch principally upon the etiology and treatment. And it is exceedingly difficult to say what the starting point was, in so young a girl, of so

grave a condition. It may have been a small hæmatoma following an abortive attempt at menstruation, giving rise to a localized cellulitis, followed by suppuration in a delicate strumous subject. As regards the treatment, it rested between laparotomy and vaginal puncture. I chose the latter and, I think, the more rational course, as by it the peritoneum was not opened. The curetting of the cavity was somewhat difficult, and required great caution and delicacy of touch. To remove the thick granulation tissue from the walls of the pus cavity and not go through, involving, probably, a fatal issue, required care. Should such an abscess open into the rectum, it becomes a serious calamity, as there is no other safe course open but to obtain drainage by laparotomy, thorough curetting, and allow the bowel opening to close.

ERYSIPELAS.—Speaking of erysipelas, Nussbaum expresses himself thus: "I have had the pleasure recently to obtain a rapid cure in many cases of erysipelas by a very simple method, which does not present any danger nor occasion any pain, which is not the case in injections of phenic acid, which are almost always cruel on account of the suffering. The erysipelatous parts, previously rubbed with a pomade of lanoline and icthyol (equal parts), are enveloped in salicylated cotton. It will be found, the day after this application, that not only has the erysipelas not advanced, but that there has been a notable amelioration in all the morbid symptoms. The roughness, the redness, and the pain have very much diminished—in a word, all the phenomena of irritation have disappeared as if by enchantment, and do not return. It is hardly ever necessary to continue the application for more than three days."—*Algemeine Weiner Medical Zeitung.*

A GENERAL ANTIDOTE FOR POISONS.—According to the *American Journal of Pharmacy*, a general antidote for poisons may be made by mixing equal parts of calcined magnesia, wood charcoal, and hydrated oxide of iron, and is applicable in cases in which the poison is unknown. It should not, of course, supersede the stomach pump or other forms of emesis.

Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

TWENTY-FIRST ANNUAL MEETING, HELD AT OTTAWA, SEPT. 12TH AND 13TH, 1888.

GENERAL SESSION.

Dr. J. E. Graham, Toronto, President, took the chair at 10 o'clock, and formally opened the twenty-first annual meeting of the Canadian Medical Association. In introducing Dr. George Ross as President elect of the Association, he expressed the great pleasure it afforded him in doing so, and said :—I think we can congratulate ourselves upon the prospect of having a very pleasant and profitable meeting, and upon the fact that we have selected as President for this year a gentleman who is in every way capable of fulfilling the duties of that office. Dr Ross is one of the leaders of the profession in the largest city of the Dominion, and his reputation is not alone confined to that city but to the Dominion at large.

Dr. George Ross, (Montreal) then took the chair.

The Secretary, Dr. James Bell (Montreal), read the minutes of the last meeting of the Association which were approved of.

The following gentlemen having been duly proposed and seconded, were unanimously elected members of the Association: Dr. Allen Baines, Toronto, Ont.; Dr. W. Anson, Ottawa; Dr. M. C. McGannon, Brockville; Dr. Thos. Potter, Ottawa; Dr. W. C. Cousens, do.; Dr. B. F. Hurdman, do.; Dr. S. Wright, do.; Dr. C. J. H. Chipman, do.; Dr. A H. Horsey, do.; Dr. J. W. Shillington, do.; Dr. W. F. Graham, do.; Dr. C. P. Dewar, do.; Dr. W. H. Klock, do.; Dr. T. L. Brown, Melbourne, Que.

The following were selected as members of the nominating committee :—

Drs. F. W. Campbell, T. G. Roddick, Montreal; J. E. Graham, Wm. Canniff, Toronto; Bray, Chatham; Sweetland and Church, Ottawa; Griffin and Mullin, Hamilton; Eccles, London; Fenwick, Kingston; Baird, Pakenham; Smith, Seaforth; the President and Secretary.

The following gentlemen were nominated :—

Chairman of Medical Section.....Dr. Bray, Chatham
" Surgical Section.....Dr. Cameron, Toronto.
" Obstetrical and Gynaecological Section....Dr. Trenholme, Montreal.

Dr. Graham pointed out that, last year, a committee was appointed, the object being to endeavor to further the interests of the Association, and to present a report at this meeting, but that owing to the absence of Dr. Stewart, ex-secretary, in Europe this summer, nothing had been done by that committee. He said that it was felt that this Association was not in such a flourishing condition as it ought to be, and that it did not hold the sympathy of the profession throughout the Dominion; also, that the By-Laws are found to be very deficient. He therefore suggested that another committee be appointed with the view of bringing in a report at the next annual meeting that would be of advantage to the Association.

Dr. Roddick moved, seconded by Dr. Bray, that Dr. Graham, Dr. Ross (President) the President elect, the Secretary and Treasurer, form the committee.—Carried.

Moved by Dr. Girdwood, seconded by Dr. Rodger, that a committee be appointed, consisting of Drs. Wright, Campbell, Sullivan, Bray, Eccles, Milne and himself, to ascertain the feeling of the different Medical Councils of the Dominion, upon what terms reciprocity of registration may be obtained between the different provinces, and the mother country and other colonies.

He stated that on making enquiry in regard to reciprocity of registration with Great Britain, he was informed that before registration could take place, it would be necessary to have an Order-in-Council passed making a new law of reciprocity of registration applicable to Canada. Reciprocity takes place between Great Britain and Australia, and he thought that we might very fairly have reciprocity of registration between Great Britain and this colony. He also remarked upon the want of harmony existing between the Medical Councils of the different provinces in not allowing members to practice in any province in the Dominion.

Drs. Bray, Mullin, Campbell, Sheard and Cousens spoke in discussion.

Motion carried.

The President read his address. (See page 241).

A vote of thanks for his able address was moved by Dr. Workman, seconded by Dr. Campbell, and carried.

Sir James Grant spoke in support of the motion

The meeting adjourned until 2 o'clock.

MEDICAL SECTION.

Dr. Bray, Chatham, in the Chair.

Dr. Sheard, Toronto, was appointed Recording Secretary.

A telegram was received from Dr. Canniff, of Toronto, regretting his inability to be present and therefore his paper on "The duty of the Medical profession under the Public Health Act of Ontario," was omitted, and Dr. T. W. Mills, of Montreal, was called upon to read his paper on "The influence of the nervous system on the nutritive processes." He began his subject by referring to a synopsis of a paper read by him last year on a new basis of improved Cardiac Pathology, which developed the theory that all the nutritive processes were constantly under the influence of the nervous system. He explained metabolism as the molecular life of protoplasm, and regarded the organic action of the nervous system, or nerve with the tissue element, as regulating these processes. He proved that nerves going to bone, on being divided, caused atrophic changes in the bone, a change called by Charcot, Acute Necrobiosis. He also referred to certain affections of the skin following nerves, which he traced to similar nervous lesions. He spoke of the cause of death in animals, after section of the vagi nerves, as being a pneumonia, which was an inflammatory process due to the severance of the nerve connection. In birds, section of nerves in connection with the heart was followed by its fatty degeneration. He discussed the influence of the Trigeminus nerve, also the inhibitory fibres, and sympathetic fibres, due wholly to such interference with nutrition. He referred to the emotions, and their influence on vital processes as being such, and also dwelt upon the training of athletes, stating that over-exertion called into play, and used up, the residual nerve force.

Dr. Mills' paper was discussed by Dr. Playter of Ottawa, and Drs. Sheard and Graham, Toronto. Dr. Graham asked Dr. Mills to explain the causes of accelerated heart's action. Dr. Mills promised to do so after he heard Dr. Graham's paper upon "A case of extreme rapidity of the heart's action." Dr. Small, Ottawa, also spoke in reference to the nervous influence on the movements of the Amoeba, and Dr. Campbell and others took part in the discussion, to all of which Dr. Mills replied.

Dr. Wright, Ottawa, then explained the absence of any

special Medical Address as he did not clearly understand what the meeting expected of him.

The Section then adjourned to meet at 10.30 a.m. Thursday.

SURGICAL SECTION.

Dr. Clarence Church, Chairman.

Dr. Proudfoot, Montreal, read notes of a case of "Excessive hemorrhage after cataract extraction, into the anterior chamber of the eye." No Anaesthetic was used, and no iridectomy made. Pressure was made over the globe by compress and bandage, which were removed next morning, owing to great pain, and an atropine solution dropped into it. Hemorrhage continuing, pressure was re-applied with boracic acid lotion, and morphia given for the pain, which was very severe. Hemorrhage continuing, on the eleventh day, enucleation was performed, and on dividing the globe, the point from which the hemorrhage came was found to be in the Retina. No reason could be given for the troublesome hemorrhage, excepting that the patient was very plethoric and a drunkard. No discussion followed the reading of this paper and the section adjourned to meet at 10.30 a. m. Thursday.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Dr. Trenholme in the chair.

Dr. Alloway, Montreal, read a paper on "The indications for, and comparative merits of Emmet's and Schroeder's methods of operating upon the Cervix Uteri. This paper gave rise to an interesting discussion upon the subject. Dr. Gardner spoke in favor of Schroeder's operation as compared with Emmet's in cases of extreme hypertrophy of the neck, and inflammation of the mucous membrane. It enables disease to be removed where Emmet's fails on account of the stitches being unable to approximate the edges together after an operation. Dr. Trenholme favored Emmet's operation in all cases, except in very extreme ones of hypertrophy and inflammation accompanied by glandular degeneration of the follicles where Emmet's operation was not available, but thought that in very few cases would this be found necessary, if the tissue was pared away well towards the cervical canal, leaving a narrow border by which tissue could be obtained. Pressure upon the hypertrophied parts afterwards would lead to the formation of the natural cervix. In no case were we warranted in amputating the cervix, if it could be avoided.

The general sense of the meeting was that it was much indebted to Dr. Alloway for bringing the subject up, and that the operation of Schroeder should be resorted to only in extreme cases.

GENERAL SESSION.

THURSDAY, September 13th, 1888.

The meeting opened at 10 o'clock. Dr. Geo. Ross, President in the Chair.

Dr. G. H. Oliver, Delegate to the Association from the Medical Society of the State of New-York, Dr. Wallis Clark of Utica, N. Y., and Dr. Imrie of Detroit, Mich., were introduced by the President, who, on behalf of the Canadian Medical Association, welcomed them.

Dr. Henderson, Kingston, President of the Ontario Medical Society, was invited to a seat upon the platform. He expressed the pleasure it afforded him to be present at this meeting, and said that as the representative of the Ontario Medical Association he felt sure that any friendly sentiments conveyed to that Association through him would be heartily reciprocated. It will always be his duty to promote that unity and concord which should exist between the Ontario Medical Association, the local societies, and this Dominion Association. He referred to the re-formation in Kingston, a short time ago, of the Cataraqui Medical Society, which is now affiliated with the Ontario Medical Association, and which has sent two delegates to this meeting, and hoped that such a society will be formed in Ottawa, and elsewhere, with the view of forming a connecting link between the local society and this Association.

The following gentlemen were elected members of the Association :—

Dr. W. J. BURNS, Caledonia; Dr. WALLACE, Metcalfe; Dr. PRESTON, Carleton Place; Dr. LYNCH, Almonte; Dr. MUNRO, Perth; Dr. SUTHERLAND, Valleyfield, Que.; Dr. BURNS, Almonte; Dr. MILNE, Victoria, B. C.; DR. DAVIS, Chelsea, Que.

The President referred to the great pleasure of seeing present a representative from such a distant province, and upon the suggestion of Dr. Proudfoot, invited Dr. Milne to a seat upon the platform.

The Nominating Committee reported as follows:—

On motion of Dr. Bray, seconded by Dr. Sheard, the Report of

the Nominating Committee was received and considered clause by clause.

Dr. H. P. Wright, Ottawa, was elected President for the ensuing year. Dr. James Bell, Montreal, was re-elected general Secretary.

A letter of resignation from Dr. Sheard was read by the Secretary.

The committee recommend that the resignation of Dr. Sheard as Treasurer be accepted, and that a hearty vote of thanks be passed to him for his services during the past seven years in that capacity.

Dr. Proudfoot, Montreal, moved, seconded by Dr. Trenholme, Montreal, that the thanks of the Association be tendered to Dr. Sheard for the long and valuable services rendered to the Association as Treasurer.—Carried unanimously.

Dr. W. H. B. Atkins, Toronto, was then elected Treasurer.

Dr. Mullin having called attention to the fact that no allowance was made to the Treasurer for travelling expenses, etc., it was

Moved by Dr. Bray, Chatham, seconded by Dr. Burns, that the travelling and other expenses of the Treasurer, Dr. Sheard, for this year, and that of 1887, be defrayed by the Association.—Carried.

The committee recommend that the following be elected Local Vice-Presidents:—

Ontario.....Dr. Chas. Sheard, Toronto.
Quebec.....Dr. F. W. Campbell, Montreal.
New-Brunswick.....Dr. Graham, Bathurst.
Nova Scotia.....Dr. Ed. Farrell, Halifax.
Manitoba .....Dr. Lynch, Winnipeg.
British Columbia.....Dr. J. M. Lefevre, Vancouver.
N. W. Territories.....Dr. Jukes, Regina.
P. E. Island.....Dr. Jenkins, Charlottetown.

And the following Local Secretaries:—

Ontario.....Dr. Griffin, Hamilton.
Quebec.....Dr. A. N. Worthington, Sherbrooke
New Brunswick.....Dr. Kellar, Fredericton.
Nova Scotia.....Dr. Webster, Wolfville.
Manitoba.....Dr. A. H. Ferguson, Winnipeg.
British Columbia.....Dr. Milne, Victoria.
N. W. Territories.....Dr Oliver C. Edwards.
P. E. Island.....Dr. McLaren, Georgetown.

The names submitted by the committee for Local Presidents and Secretaries were carried unanimously.

The committee recommends that the next annual meeting be held at Banff, N. W. T. in the early part of August, 1889

On the suggestion of the Committee that the next annual meeting be held at Banff, a general discussion ensued.

Invitations were extended to the Association to hold its next annual meeting at London, Ont., by Dr. Eccles; at Toronto, Ont., by Drs. Sheard and Graham, and at Victoria, B. C., by Dr. Milne, and a letter received by Dr. Ross from Lucius Tuttle, Passenger Traffic Manager of the Canadian Pacific Railway Company at Montreal, dated September 11th, 1888, was read, stating that if the Association desire to meet at Banff, a trip will be given from Montreal, or from other Stations in Ontario or Quebec on the line of the Canadian Pacific Railway to Banff and return, first class, including a double berth in the sleeping car for each person, meals in the dining cars on the way west of Montreal and back, and four days living at the Banff hotel, for a round sum of $95, and that similarly low rates will be made from other points in Canada, and as far as possible from cities in the United States.

Dr. Walker, Dundas, moved in amendment to the Report of the committee that the Association meet next year at Toronto to receive the President's Address, and then adjourn to meet at Banff for the transaction of other business. Dr. Horsey, Ottawa, seconded the amendment.

Dr. Mullin, Hamilton, moved in amendment to the amendment, seconded by Sir James Grant, that the next meeting of the Association be held at Toronto on such date as may be deemed advisable by the officers of the Association, and that, in addition, an excursion to Banff be organised by them to take place immediately after the meeting.

The amendment to the amendment, and the amendment to the Report of the Committee were lost on division, and the recommendation of the committee carried that the next annual meeting be held at Banff in the early part of August, 1889.

Dr. Bray, Chatham, moved, seconded by Dr. Trenholme, Montreal, that the Executive make satisfactory arrangements with the railway authorities for members to go to the end of the line.—Carried.

Dr. H. P. Wright, Ottawa, thanked the Association for the honor conferred upon him in electing him President for the coming year.

The meeting then adjourned to meet in Sections.

MEDICAL SECTION.

THURSDAY, September 13th, 1888.

MORNING SESSION.

Dr. Bray in the Chair.

Dr. Graham, Toronto, was called upon to read his paper on "A case of extreme rapidity of the heart's action." He reported two cases, one of which was characterised by a rapid beating of the heart, the beats numbering over 140, and being uncountable. His illness lasted three weeks, and the peculiar features in the clinical history were the absence of dyspnoea, the absence of renal changes discoverable on examination of the urine, and any physical signs directly referable to the lungs. The case was treated by rest, regulation of diet and the administration of digitalis, and after a comparatively short treatment, the patient recovered his accustomed health. The second case was more prolonged and peculiar in the fact that continued muscular exertion reduced the heart's beat to normal. This had been discovered by him only after repeated examinations, and during a period of rest, the heart again became accelerated. There was nothing in this case to account for such acceleration.

Dr. Mills explained in extenso the influence of the Cardiac nerves upon the heart's action, dealing mainly with the sympathetic and vagi. He spoke also of embolism in the coronary arteries as a possible cause of such acceleration. He referred to blood pressure, as slowing the heart's action rather than accelerating it. Dr. Sheard discussed the case, and suggested embolism, or toxic matter in the blood as a possible cause for such acceleration, and referred also in commendation to digitalis as a method of treatment, particularly the infusion of digitalis. Dr. Mullin thought it was an important case, and had direct bearing upon the importance of acceleration of the heart as affecting a life insurance risk. He would like to ask Dr. Graham what influence he thought such acceleration of the heart would have in shortening the ordinary duration of life. Dr. Milne, Victoria, also spoke, referring to a case of modified heart's action associated with tetanus, and stating that such cases were evidently due to a close association between the nervous and cardiac action.

The section then adjourned to meet at 2 o'clock.

SURGICAL SECTION.

Thursday, Sept. 13th, 1888.

MORNING SESSION.

Only one paper was read at this session, that by Dr. Fenwick, of Montreal, upon "Retropharyngeal Tumors." The operation is formidable, and its literature rather scanty. Dr. Cheever, of Boston, Mass., appears to have been the first who operated on these tumors. Velpeau operated in 1836 on a large tumor, operating by the mouth, tying the common artery first. The patient died on the seventeenth day. Dr. Fenwick was early convinced that operating from the outside is the correct method. These tumours are usually sarcomatous or cancerous, and in a large majority of cases, recur. Dr. Fenwick then proceeded by diagrams to illustrate Dr. Cheever's method by cutting from without. A long, straight incision is made, beginning on a level with the lower border of the ear, and extending down the neck in the line of the great vessels. If sufficient room is not thus given, he makes a transverse insicion from the straight incision across the jaw. The jaw is not divided, the vessels and nerves are drawn aside, and the tumor enucleated in the usual way. Czerney's operation is modified from Cheever's. He opens the trachea and keeps up respiration in this way during the operation. He divides the jawbone between the second and third molar, and in getting down to the tumor, has to sacrifice the chief nerves and vessels in that region. He then removes the tumor with a hot knife. Dr. Fenwick then described his own operation by a curved incision following tolerably well the line of the angle of the jaw. In two cases, the operation was easy, no vessels or nerves of importance were divided, except the facial nerve in one case. The bleeding in both cases was practically nil.

Dr. Sheard thought that distinction ought to be made between cancerous and sarcomatous tumors. He thought cancerous tumours, which were not neglected, required a more serious operation, and that more room should be given, as they could not be removed solely with the finger without dissection.

The section then adjourned until 2 o'clock p. m.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

THURSDAY, Sept. 13th, 1888.

Dr. Smith, Montreal, delivered his paper upon "Some minute but important details in the management of the continuous current in the treatment of Fibroid and other diseases of the Uterus." He insisted upon attention to the antiseptic treatment, and upon performing all the operations with care. The results in his own hands had been very satisfactory. He recommended the Electrode of Dr. Inglemann in preference to Apostoli's clay electrode. The different forms of electrodes and sounds were shown, and that of Martin he favored most, as being the least expensive, and, at the same time, serving the purpose. He referred to the necessity of exact dosage, and the after care of patients where much electricity had been used.

This paper led to a very interesting discussion as to the field for which it was intended to be useful. Dr. Trenholme, Montreal, favored an antiseptic method apart from irrigation, simply advising that the vaginal passage be washed out with soap and water, and a plug of antiseptic cotton left in contact with the cervix, when the sound was removed. Other members took part in the discussion.

The session was then brought to a close.

MEDICAL SECTION.

AFTERNOON SESSION.

Dr. R. P. Howard, Montreal, read an interesting paper on "Ophthalmoplegia Externa," illustrated by diagrams. He spoke of a case of Ophthalmoplegia Externa and Interna, and explained as a cause the close association of the cerebral centres, and the extension of the disease from these. He also mentioned peripheral neuritis as being a cause in some cases. He referred to cases recorded where both Ophthalmoplegia Externa and Interna had been caused by hysteria. He noted also the association of this condition with locomotor ataxia and pseudo-hypertrophic muscular paralysis. He was convinced, however, that Ophthalmoplegia Externa could exist without such association. He also discussed the relation of syphilis to this ocular disease.

Dr. Howard's paper was commended very highly by Dr.

Graham, of Toronto, who spoke as to the very great rarity of such cases.

Dr. Stewart, Montreal, also spoke in reference to it.

The paper of Dr. Campbell, Seaforth, "Myxœdema, with report of a case," was taken as read.

Dr. Playter, Ottawa, read a paper on a few facts relative to Communicable Diseases in man and animals, especially as brought out at the recent Paris Congress and British Medical Asociation, referring particularly to Tuberculosis. His paper was listened to much with attention, and was discussed.

The Medical Section then adjourned.

SURGICAL SECTION.

AFTERNOON SESSION.

Dr. Bell, of Montreal, read a paper on "Exostosis Bursata," in which he gave the notes of a case which he believed to be the only one reported by an English-speaking surgeon. Dr. Shepherd, Montreal, referred to the great rarity of the disease, and drew attention to the explanation which was offered of the existence of floating cartilages in the joints.

Dr. Shepherd followed with a paper on "Mania following operations." He reported six cases. Dr. Bell, in the discussion which followed, related two cases, in one of which he attributed mania to the use of Iodoform. He asked if there were any cases on record due to Iodoform. Dr. Buller related his experience of one case of mania following the operation on a cataract. Dr. Dickson, of Pembroke, asked Dr. Shepherd, if mania from Iodoform would be apt to occur in the use of the drug when applied to small surfaces. Dr. Shepherd replied that the danger would be greatest when Iodoform was applied to a large surface, as, for instance, to the interior of a large abscess cavity.

Dr. Buller then made a few remarks on "Penetrating Wounds of the Eye Ball." Dr. Proudfoot related a case of a penetrating wound of the eye-ball produced by a pen. He agreed with Dr. Buller as to the urgency of an immediate and prompt treatment, and cleansing the wound. In reply to Dr. Dickson, Dr. Buller advised, for the control of inflammation, the application of cold, to be changed to warm applications, with antiseptic solution of bi-chloride of mercury, one part in 10,000, and one or two doses of 10 or 15 grains of Antipyrin.

Dr. J. Stirling, Montreal, followed with a paper on "Some eye symptoms due to Cerebral Lesions." Dr. Buller said that in cases of fracture of the orbital plate, the blindness may be due to infiltration of blood in the sheath of the nerve, and reported a case which had occurred in his practice of that nature.

Dr. A. Lapthorn Smith's paper on "The treatment of Varicocele and Orchitis by the electrical current of tension" was then read; also a paper by Dr. Smith on a "Case of Resilient Stricture of the Urethra cured by electricity." Dr. Dickson enquired if Dr. Smith had ever used the treatment in neuralgia, sciatica, or enlarged prostrate. Dr. Buller suggested the decomposition of water as an easier method of determining which is the negative pole. Dr. Smith in reply to Dr. Dickson, said that the use of a continuous current would probably prove useful in the enlargement of the Prostate. In reply to Dr. Church, Dr. Smith said that his cases had been under observation for a considerable time and certainly after a lapse of three years might be considered cured. Dr. C. Dickson, Kingston, said that in his large experience in the use of electricity in neuralgia, he had found the negative pole of tension often increase the pain, especially if any neuritis existed.

GENERAL SESSION.

THURSDAY, 6 o'clock p.m.

Dr. Geo. Ross, President, in the chair.

The minutes of the last session were read and approved.

Moved by Dr. Milne, Victoria, B.C., seconded by Dr. Sweetland, Ottawa, that in view of the apparently increasing prevalence of tubercular disease in domestic animals, more especially in cows, it is the opinion of this Association that it is desirable that some legislative action should be taken by the Dominion Government to check the progress of this disease, and we urge that the Government take this matter under their consideration at as early a date as possible. Carried.

Dr. Mullin, seconded by Dr. Smith, that the cordial thanks of this Association be tendered to the members of the profession in Ottawa for the courteous manner in which they have treated the the Association, and its members individually. Carried.

It was moved by Dr. Sheard, seconded by Dr. Pickup, that the thanks of the Association be tendered to the Railway and Steam-

boat Companies for travelling privileges accorded to members of the Association. Carried.

Dr. Fenwick moved, seconded by Dr. Sweetland, that the thanks of the Association be the tendered to the Dominion Government for the use of the Railway Committee Rooms for the purpose of holding the present meeting. Carried.

On motion of Dr. Mullin, Dr. Wright, President-elect, took the chair.

Dr. Sheard, Toronto, in moving a vote of thanks to Dr. Ross, retiring President, said that he was sure that all the members of the Association appreciated the whole-souled manner in which Dr. Ross acted in the position of President of the Association. Much is due to Dr. Ross for the success, the vitality and the perseverance which has characterized, and which has blessed the Dominion Medical Association, and he hoped that he might be long spared to give us his guiding counsel.

Dr. Church, Ottawa, seconded the motion, which was carried unanimously.

Rr. Ross thanked the Association for the vote of thanks tendered him, and said that as regards the Association he had always felt indeed a very keen interest, and had always endeavoured to do his share in supporting its interests. With reference to the coming year, the President's duties, according to our present regulations, only begin with his presidence over the annual meeting of the Association. He might, therefore, be of some service to the Association in assisting in making the next annual meeting a success, and as they had come to a decision as regards the place of meeting, he hoped that members would use every endeavor to be present, and to make the meeting a successful one. Every exertion should be made to attract a large number of our Canadian graduates who are now scattered throughout the North-Western States, and a number of American physicians, to the next annual meeting at Banff.

Dr. Sweetland, Ottawa, was appointed Auditor.

On the motion of Dr. Mullin, Hamilton, the thanks of the Association were tendered to Dr. James Bell, Montreal, for his valuable services as Secretary.

The twenty-first annual meeting of the Canadian Medical Association was then brought to a close.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

First Triennial Session, held at Washington, Sept. 18, 19 *and* 20.

Dr. Reginald H. Fritz of Boston opened the discussion on *Intestinal Obstruction in its Medical and Surgical Relations.* He confined himself to the diagnosis and medical treatment of acute, internal and mechanical varieties of intestinal obstruction. The only causes recognized were strangulation from adhesions, vitelline remains, peritoneal slits, pockets and rings; intussusception, knots and twists; abnormal contents; strictures and tumors. The evidence presented resulted from the analysis of 295 cases collected from medical literature since 1880. The most constant symptoms of obstruction proved to be pain, vomiting, tympany, and tumor. Stoppage of the bowels was not regarded as the most essential symptom in diagnosis, since frequent, loose stools characterize intussusception and may occur in other varieties of obstruction. Too much attention directed to this symptom leads to erroneous diagnosis, since it is of frequent occurrence in peritonitis, and often results in irrational and injurious treatment. The physician is called upon to decide whether the given case is one of acute obstruction; then, where its seat and what its cause; and, finally, what is to be done. The evidence showed that the diagnosis is to be made by excluding the various causes of peritonitis. Its seat in the large or small intestine is to be determined by injection, under high pressure, when necessary. The variety is, for most practical purposes, an intussusceptum or a twist of the large intestine, and strangulation or gall-stones of the small intestine. The differential diagnosis depends upon the relative frequency of these varieties, the age of the patient, the antecedent and immediate symptoms. The treatment consists in the attempt to relieve intussusception of the large intestine by forced injections, under anæsthesia and with massage, and to treat obstructing gall-stones by opium, possibly with the aid of laxatives and electricity. All the other varieties of acute obstruction require surgical treatment. The latter is also necessary, on or before

the third day, in cases of intussusception not yielding to forced injection, and in gall-stones when the symptoms become urgent.

DR. SENN of Milwaukee said that the operative treatment of intestinal obstruction was in its infancy. Since laparotomy for other indications has become an established and frequently practised procedure, a number of the bolder and more aggressive surgeons have resorted to direct measures for the relief of intestinal obstruction, but, like all serious operations for otherwise incurable and fatal affections, its general application has met with strong opposition, not only by the laity, but also by the profession. The appalling mortality which has attended the operation in the hands of even the most competent surgeons has been quoted in the discussions on this subject in medical societies as a sufficiently strong argument in favor of non-operative interference. In this regard, the history of laparotomy for intestinal obstruction is only a repetition of the history of ovariotomy. The mortality of laparotomy for acute intestinal obstruction will be reduced to that of other intraperitoneal operations, and surgeons will recognize the importance of operating early before the patient's strength has been wasted by the disease, and before the parts involved in the operation have undergone irreparable textural changes. The mortality of abdominal section in the treatment of the different forms of intestinal obstruction will always be great, because the conditions which have caused the obstruction are often an intrinsic source of danger. In others, the removal of the obstruction necessitates an intestinal resection, which in itself is a vastly more serious operation than the removal of an ovarian tumor. Intestinal obstruction, irrespective of its cause, is always followed by a series of consecutive pathological changes which, independently of the partial or complete interruption of the passage of intestinal contents, tend to destroy life. The dilatation of the intestinal tube on the proximal side of the seat of obstruction may give rise to such a degree of abdominal distention as to destroy life from suspension of important functions by mechanical pressure. In acute obstruction, violent peristalsis on the proximal side of the occlusion causes an increased afflux of blood to the portion of bowel the seat of exaggerated physiological function; which, after cessation of peris-

taltic action, remains as an intense venous and capillary engorgement. During the paretic stage the blood-vessels in the intestinal wall have lost their support, hence transudation and exudation readily take place into the paravascular tissues, which, combined with the capillary stasis attending this stage of the inflammatory process, results in gangrene. The intestinal wall, in a state of inflammation, becomes permeable to pathological micro-organisms which are always present in the intestinal canal, and which, after passing through the entire thickness of its walls, enter the peritoneal cavity and induce septic peritonitis—a frequent immediate cause of death. These facts are cogent reasons for adopting surgical measures in all cases of intestinal obstruction due to mechanical causes as soon as a diagnosis can be made. If this were done, the two greatest sources of immediate danger attending and following laparotomy, shock and septic peritonitis, if not entirely avoided, at least would be less likely to occur, and the tissues the seat of operation would be in a favorable condition for direct treatment and repair. An abdominal section in the treatment of intestinal obstruction is always necessarily attended by some shock, and it is therefore of the utmost importance to perform the operation at a time when the organs of circulation and the nervous system are still in a condition to resist successfully the immediate effects of the operation. Death from septic causes can only be avoided by operating at a time when the intestinal canal, at the seat of obstruction and on its proximal side, is still in a condition capable of resisting infection, and of undergoing a satisfactory process of repair, in case it becomes necessary to incise or resect during the operation. The statistics of operation for intestinal obstruction will improve as soon as we shall be able by improved methods of diagnosis to make an early positive diagnosis, and will adopt in the treatment positive surgical measures before the prospects of a recovery have been rendered improbable, if not impossible, by days and weeks of useless, and more than useless, medication. True intestinal obstruction, whatever its cause may be, is as strictly a surgical affection as strangulated hernia, and remediable only by the same kind of surgical treatment. Physicians should recognize this fact, and should call into counsel a surgeon as soon as a

probable diagnosis of intestinal obstruction can be made. To let a patient die of the consequences of a removable cause of obstruction, without an operation, is a reflection upon modern surgery. The difficulties which surround the diagnosis, and the present imperfect technique of the operative procedures in cases of intestinal obstruction, are not only responsible for the heretofore late operations, but also, to a great extent, for the many failures. Ways and means for more accurate diagnosis will have to be devised by more careful clinical observations and by experimental research, while new and improved methods of operation must be devised and their merits safely tested by experiments on animals. Insufflation of hydrogen gas is a valuable means of diagnosis in locating the seat of obstruction before tympanites has set in, and, therefore, best adapted at a time when most needed—during the early stage of intestinal obstruction. If the colon dilates uniformly from the sigmoid flexure to the cæcum, the obstruction must be sought for higher up in the intestinal canal. The passage of gas through the ileo-cæcal valve, rendered incompetent by the distention of the cæcum, is always attended by a characteristic gurgling or blowing sound, which is always heard most distinctly by applying the ear or stethoscope over the ileo-cæcal region. Not infrequently the sounds are so loud and distinct that they can be heard at a distance of several feet. If the gas passes the ileo-cæcal valve under a pressure not in excess of that required to overcome it in a state of health, and if, after inflation, a thorough examination of the ileo-cæcal region by inspection, palpation, and percussion reveals nothing abnormal, the search for the obstruction is continued by inflating the small intestine slowly and making frequent examinations of the abdomen to ascertain the height to which inflation has been made and to study the relative positions of the different abdominal organs. Inflation is also a useful diagnostic resource in locating the obstruction during laparotomy for intestinal obstruction. The intestine below the seat of obstruction is always empty, collapsed and anæmic as compared with the portion above the obstruction. When the obstruction is located high up in the intestinal canal and the tympanites is extensive, the empty portion of the small intestine has by

compression become displaced, and is often not readily found. In such cases the distention of the bowel from below will indicate to the surgeon at once the location and length of the intestine below the seat of obstruction from below upward. The manipulation of the healthy intact portion of the intestinal canal in search for the obstruction is by far a less hazardous procedure than the handling of the distended portion above the obstruction rendered paretic, exceedingly vascular, and much softened by obstruction. In cases in which we suspect the presence of a perforation, inflation with hydrogen gas will demonstrate not only its existence, but also its location. Invagination is rare above the ileo-cæcal valve, and location can be determined by inflation with hydrogen gas, and if resorted to early it may prove the means of effecting the mechanical reduction. In ileo-cæcal and colonic invagination slow and persistent distention of the colon with hydrogen gas, with the patient completely under the influence of chloroform, is the safest and most efficient means of effecting reduction, and should always be resorted to whenever these conditions are recognized or even suspected.

Mr. Durham of London desired to express the extreme pleasure he felt in coming here among his American *confrères*, and at the hospitable reception he had received at their hands. The subject of intestinal obstruction is one in which he had taken the greatest possible interest. It was possible some of those present might have come across a book entitled *Quain's Dictionary of Medicine*, and if they would look over that book they would find that the article on intestinal obstruction was written by him. He takes a deep interest in these cases, inasmuch as the life and health, the comfort and prosperity of the patient depend upon a rightful action on the physician's part. Truly he may say there is no class of cases more dangerous, more serious, more urgently calling for surgical treatment than those cases of intestinal obstruction. He agreed with Dr. Senn in one thing, and that is, that the sooner the physician calls in the surgeon the better it is for the patient. He agreed with Dr. Senn that surgical operation should be performed as soon as the diagnosis is made, but he did not know any class of cases in which the diagnosis is so difficult as in this class of cases. He

went further than Dr. Senn and said that cases do occur, from time to time, in which the surgeon is justified in operating before he had made a diagnosis, in order to enable him to make one. In regard to this question of diagnosis, he said that if his hearers would recall his article in *Quain's Dictionary* they would recollect that he had collected several thousand cases. What we should be guided by is not the statistical probabilities, but the actual indications of the particular case before us. Every case must be studied and judged upon its own merits, and treated according to the indications that present. The chances may be 999 to 1000 in favor of one man and 1 to 1000 in favor of another. In regard to the treatment of intestinal obstruction, he would say the first thing to do is to determine the seat of the obstruction. In cases of acute intestinal obstruction, or where there is reason to believe that the obstruction exists in the small intestine, then he believes the proper course of treatment to pursue is to open the abdomen and search for the cause, and relieve it as best we can. On the other hand, when the indications are that the obstruction is in the large rather than in the small intestine, there is not the same degree of urgency in a very large proportion of cases. Of course, the procedure to be adopted must depend upon the fact as to the seat and the cause of the obstruction, and here he ventured, with the greatest hesitation, to take issue with Dr. Senn on this point. Dr. Senn said that lumbar colotomy is obsolete. As a matter of fact, it is not obsolete. It is an operation that is performed on the other side of the Atlantic day after day, and will never become obsolete if he can help it. He knew of no operation in surgery, except the simple one of tracheotomy, that affords so much relief and prolongs the patient's life as this. He said that if he himself were the subject of cancer of the rectum, he should most certainly have lumbar colotomy performed.

Dr. Wm. Ord of London said that he supposed he was called upon as a physician to express the general inadequacy on the part of that branch of the profession to deal with the subject of intestinal obstruction. The fuction of the physician appeared to him, as has been said before, to come in very early in the case. He must admit that the question of diagnosis is a matter

of very great difficulty, where in the case of physiological obstruction there is an absence of indication of local pain or a fever, or anything like a bloody discharge from the bowel. Perhaps he may be thought to be a little cowardly, under such circumstances, if he should be inclined to adopt the views of the first speaker rather than of the second, and claim a little time. Sir William MacCormack would, he thought, bear him out in some of his remarks. In a good many of these cases he has operated with the greatest care, but the operation has been performed too late. But in cases in which things seemed most favorable in regard to time, and in which the operation was done with the greatest care and most perfect surgical completeness, it has been as satisfactory in its results as one might have hoped.

Mr. Thomas Annandale of Edinburgh said that he had two good reasons for not speaking; first, he had arrived but half an hour ago from the steamer, and second, that, unfortunately, he had not, owing to that, been able to hear the papers or much of the discussion. As he had been called upon to speak, he might be permitted to give his opinion in regard to the treatment of intestinal obstruction. Now, in regard to treatment, he thought it was very important to divide these cases into acute and chronic. In regard to the acute cases, it is perfectly right that everything medicine can do should be tried, but should not be tried too long. As soon as it has been tried for forty-eight hours, then the case belongs to the surgeon, and the sooner he opens the abdomen the better. If possible, open the intestine and form an artificial anus. In regard to chronic cases, he thinks one might wait, in fact, until the symptoms have become acute, and then, if the symptoms of a chronic intestinal obstruction become acute, he should operate at once. He had heard his friend, Mr. Durham, speak of lumbar colotomy in cases of cancer of the rectum. He has learned to prefer inguinal colotomy in the left inguinal region, because it is not a serious operation in the matter of risk, if properly done, and is certainly a simple one in a large majority of cases.

Dr. Senn, in closing, said that he could assure Mr. Durham that hydrogen when injected into the intestinal canal never forms an explosive, as the canal naturally contains hydrogen

gas. It has been tried hundreds of times on animals and at the bedside without an explosion. One of the first experiments he made was on himself. In reference to colotomy, he would say that he did not mean to condemn this operation. He advocated its use in several cases, but he did repeat the statement that lumbar colotomy might become obsolete. The operation is done for the purpose of securing to the bowel perfect physiological rest, which cannot be done by a lumbar colotomy.

AMERICAN GYNÆCOLOGICAL ASSOCIATION.

Dr. Howard A. Kelly read a paper on *Palpation of the Ureters in the Female*. He thought that Carl Pawlik's method was a very valuable means of examining for calcareous masses lodged in the ureters or kidneys. Inflammatory conditions also could be diagnosed. The bladder should be dilated with some bland fluid as a preparation.

During the discussion upon Dr. Kelly's paper, Dr. Wm. Polk of New York spoke of the ease with which the ureters can, at present, be palpated either per rectum or vaginam, and that it was a method of examination with which every one should make himself familiar.

Dr. Stansbury Sutton of Pittsburg read a paper on *Pelvic Abscess*. He spoke of two forms—septic and aseptic. When we cannot trace any septic origin, we are inclined to say that the inflammation arises from cold. Warm poultices in treatment did no good, and were only used as a matter of ancient usage. He preferred a blister or ice applications.

Dr. Goodell, in discussion, said he never saw a case of pelvic abscess arise from gonorrhœa; it is almost invariably due to septic infection; occasionally from cold during menstruation. He operated early, and when he had to deal with a rectal opening he inserted a probe into it and cut down upon the probe through the vagina, thus converting the rectal into a vaginal fistula, and the rectal opening closes.

Dr. Parrish of Philadelphia did not use aspiration as a curative method of treatment, only as a means of diagnosis. He thought it was not safe to use so strong a solution of the bichlo-

ride as 1–1000. It was not safe to wait in these cases until a distinct tumor had formed.

Dr. T. Gaillard Thomas of New York spoke of three forms of pelvic abscess: (1) Inflammation of the broad ligaments; (2) of the cellular tissue between the vagina and posterior part of the uterus; and (3) the cellular tissue between the bladder and the uterus. Another form he would add, viz., pyosalpinx. He thought that laparotomy could often be avoided by draining through the vagina. Fluctuation in hard pelvic tumors often cannot be obtained, and still contain pus. Constitutional symptoms should not be waited for. He said there are but two localities through which pus should be let out from the pelvis—the vagina and through the abdominal wall. An abscess pointing towards the rectum should never, if possible, be allowed exit there, it is a calamity. Dr. Thomas cited two cases of death from the escape of fæces and gas into the abscess cavity. Neither should an abscess ever be opened into the bladder; he dissected up the paravesical tissue as he would in extirpation, and got at the abscess in this way. He used a dilator and always drained. Pelvic abscesses are always immoveable, neoplasms moveable; this was a valuable diagnostic difference.

Dr. Gill Wylie (New York) thinks that four out of every five cases occurring within a year or two after delivery were due to salpangitis or ovaritis. He prefers to open the abdomen at once; it is of no use to leave a rotten ovary behind after opening the vagina. Dr. Wylie spoke of one patient having died in New York and one in Chicago from using an aspirator in pelvic abscess.

Dr. Polk believed pelvic abscess to be directly due to tubal disease, the infection being carried by the lymphatics from the uterus.

[It will here be noticed the extraordinary and marked diversity of opinion existing between the foregoing surgeons regarding the cause and treatment of pelvic abscess.]

Dr. Sutton said it was not the stem or the sound that produced pelvic abscess, but the infective matter introduced with either.

Dr. Reamy of Cincinnati read a paper on *High Amputation of the Cervix for Cancer*. This was a very interesting and practical paper, and brought out some important facts. At first he used bromine solution following curetting; the strength of the solution was 1 to 13 of alcohol. The thermo-cautery was also used in these cases. Later on he began to use the scissors. He occasionally opened the peritoneal cavity unavoidably, and then caustics could not be used. When the incision took place between the vaginal junction and the internal os the latter remained unimpaired, which was important. It was, however, most important to cut wide in the healthy cellular tissue, as this formed the field for spreading of the disease more than did the cervical tissue proper. Cases treated in this way were those wherein the disease was confined to the vaginal portion and not beyond. The disease must not have involved the supra-vaginal portion. When the disease is so confined, Dr. Reamy said total extirpation should not be performed. Dr. Reamy prefers the wedge-shaped incision for the following reasons: (1) It removes the epithelium; (2) it removes the sub-epithelial tissue; (3) it leaves a flap to be closed in on the stump by sutures; (4) the stump in the vagina presents a more natural appearance than after amputation. Seventy-five to eighty per cent. of cases begin in the squamous epithelium, goes up into the cellular tissue, and may never invade the body at all; therefore he advises to cut wide and remove only the vaginal cervix. Dr. Reamy cited cases now alive and having survived from five to fifteen years after the operation of partial extirpation. He does not believe that cases should be limited to two years without recurrence, and considered as cures.

Dr. Baker of Boston said that Dr. Sims and Dr. Thomas both began to use the scissors at about the same time, but that their work was interfered with by the Woman's Hospital Board adopting a measure which excluded all cancer cases. Dr. Baker then began to do his operation, following Sims' teaching. He separates the parts according to Schroeder's method, and then removes a wedge-shaped piece as high as the fundus. When the wound thus made was closed with sutures, he found that the

disease returned in the stump. He therefore began to use the thermo-cautery and left the wound open. In 1886 he reported ten cases. Six of these were living at end of three to four years; five are living now six to ten years after operation. He stated that he would shortly show by publication that fifty per cent. of cases operated on survived four years after operation. He believes that total extirpation should be limited to those cases where the diseases originated in the body of the uterus, or in which it extended upwards instead of laterally. He cited cases now alive after four years which were treated with the knife, cautery and chloride of zinc (strength ℥v to ℥i).

Dr. Byrne of Brooklyn said that nineteen years ago he read a paper before this Society, in which he restricted his treatment of cancer of the cervix to one method—removal by the galvano-cautery. This method consisted in making a circular incision with the knife around the cervix, near its vaginal junction. Traction is then made on the cervix, and the cautery wire is slipped into this incision and connection with the battery made. He stated that he had never known, out of 130 to 140 cases, the disease to return when the cervix was removed in this manner (*sic*).

During the discussion upon this paper, the extreme rarity of cancer of the cervix in the virgin was acknowledged. Dr. Reamy stated that he had known of only *one* case in his experience.

Dr Vander Walker felt something should be said in favor of escharotics in the treatment of uterine cancer. He thought that when once you removed the cervix by a cutting operation you were powerless should a return of the disease take place. In one case he treated with chemicals, his patient experienced seven relapses, and during all this time she had been kept alive and able to do housework, by curetting followed by chloride of zinc. He therefore thought that chemical cautery should have a place, and be considered in this respect as against amputation with knife or scissors.

Dr. Reamy, in his reply, paid a high tribute to the views of Dr. Vander Walker in the latter's intercession for the use of

caustics, but said that the method he advocated in his paper did not preclude the employment of chemical agents also. Dr. Reamy concluded with a most brilliant peroration in defence of the curability of cancer of the cervix if seen at all early. He regarded Williams of London as a great authority, but regretted much that that author did not recognize the vast and valuable work done by American surgeons in this field.

Dr. E. C. Dudley of Chicago read a paper on *The Technique of Vaginal Hysterectomy*. The principal point the author dwelt upon was the controlling of hemorrhage by pressure forceps instead of by ligatures. After the peritoneum had been reached the opening was enlarged by inserting the forefinger of each hand and spreading them forcibly apart, so $\wedge$, until the broad ligaments were reached. The broad ligaments were also controlled by forceps, so also the ovaries if necessary. If in doubt, forceps can be fixed on the broad ligaments from behind also. He has had as many as twenty pairs of forceps hanging in the vagina at once, and did not find they at all interfered; spoke strongly against inverting the uterus, and said that he has by this method performed the operation in so short a time as twelve minutes. He closes the wound also by forceps, and his reasons for so doing are to prevent prolapse of intestine, and in this way give rise to peritonitis. A great value of the forceps, besides acting as hæmostatics, is that of ensuring good drainage. He wraps the handles in iodoform gauze, and does not use drainage of any other kind, the metal instruments, he contends, being the very best conductors of fluids. The forceps thus placed can be removed in twenty-four hours, but he prefers leaving them on for forty-eight. He does not advise vaginal tampons of any kind, as they interfere with drainage. He simply applies a vulvar dressing, which is frequently changed. He quoted twenty cases with two deaths (10 per cent.) When the tumor is very large he has an idea of doing laparotomy and fixing the forceps on the broad ligaments through the vagina, but guided by the fingers of the other hand passed through the abdominal opening into the pelvic cavity. He concluded by contending strongly in favor of the forceps superseding all other methods of hæmostasis.

Dr. Jas. B. Hunter of New York stated that vaginal extirpation of the uterus with ligatures was the most difficult operation in uterine surgery, and that undoubtedly the employment of forceps would do much to shorten and render more easy the performance of the operation. He said there was as yet a difficulty in this matter, and that was the want of the right kind of forceps. He used those of Richelieu as modified by Polk, and thought them the best as yet made. Spoke of one case requiring thirteen pairs of forceps, which were removed in forty-eight hours. He thinks they secure good drainage. Does not close the wound, wraps forceps with gauze, and uses no drainage tube. Thinks the forceps of whatever model should be very strong; considers thirty minutes sufficient time for the operation.

Dr. Reamy thinks it is impossible to sufficiently compress the broad ligaments with one pair of forceps on each. The blades ought to completely enclose the stump. Dudley's forceps are too small and weak. He does not think vaginal hysterectomy at all a dangerous operation, certainly not more so than ovariotomy.

Dr. Lane of San Francisco (by invitation) said he was the first surgeon in America who had performed vaginal hysterectomy. He had in all operated fourteen times, uses strong cord as ligatures, and never used forceps. Dr. Lane stated that he considered vaginal hysterectomy *the* safest capital operation in surgery. In his fourteen cases he had only one death. He had found the operation more difficult in very fat women, and comparatively easy in very thin women. He spoke of the danger of wounding the rectum, which happened in two of his cases.

Dr. H. Marion Sims of New York read a paper on *The Importance of the Microscope in the Treatment of Sterility in Women.* Dr. Sims' essay was, upon this important subject, a most valuable and interesting one, delivered in a manner full of earnestness and gentle modesty so characteristic of that gentleman, and so pleasant to listen to. The principal features brought out were in regard to cause and treatment. The author laid stress upon the abnormal condition of the secretion of the cervical canal as a cause of sterility, and impressed upon the surgeon the necessity of not discharging his patient as cured until

the secretion had become normal, and thereby not poisonous to the spermatozoa. He also dwelt upon the necessity of removing neoplasms, of correcting displacements, and of operating for lacerations, etc.

DR. JAS. B. HUNTER, during discussion, said that he believed in the necessity for dilatation and incision in such cases.

DR. WILSON of Baltimore also believed in dilatation and incision.

DR. JOHNSTON of Danville, Ky., laid stress on one cause left out by Dr. Sims—viz., the infantile uterus of adults caused by injury to the pelvic sympathetic supply, giving rise to a paralysis analagous to a form of infantile paralysis. Menstruation in such cases is irregular, but the physical formation of the woman is good. All parts, in fact, are healthy but the uterus, which lacked power to form a placenta.

DR. SKENE of Brooklyn found abnormal condition of secretion in cases of infantile uterus. The secretion in some cases resembled that of pneumonic sputa. In answer to Dr. Skene, Dr. Johnston said that there was a difference histologically between the infantile uterus and the senile uterus; to wit, the infantile uterus has more epithelial development than the senile, the secretion is therefore different. The senile uterus is simply an organ composed of pure scar tissue, which becomes more and more dense as age creeps on.

DR. SIMS, in reply, said he was fully impressed with the fact that when death after incision occurred, it was invariably when the operation had been done in the office by an unskilled enthusiast, and the patient allowed to go home afterwards. He thought that gentlemen engaged in a large general practice should be careful, and not be tempted into performing in an off-hand way a procedure so apparently harmless and simple. They may succeed a few times, but sadness and regret will be sure to follow some dire calamity, which must ever be inevitable under such circumstances.

DR. JAS. B. HUNTER read a paper upon *Pregnancy as a Complication in Pelvic Disease*. In this elaborate paper Dr. Hunter enumerated all of the known pelvic complications of

pregnancy. It was shown that most tumors grew rapidly during pregnancy, and that benign growths of a certain nature were liable to become malignant.

Dr. Skene of Brooklyn, in discussion, said that utero-gestation had a general good effect on mal-nutrition, especially when accompanied with a flexed uterus of mal-developmental origin. He thought it was an unfortunate thing for women with chronic pelvic inflammation to become pregnant. If, however, a woman with a displacement becomes pregnant and goes to full term, she will likely be much benefitted. He was under the impression that it was a mistake to consider pregnancy beneficial in cases of displaced ovary. He had invariably found that the displaced ovary had again dropped down after parturition, and caused as much trouble as before.

Dr. B. McE. Emmet thought it better to endeavor to cure the pelvic inflammation before pregnancy took place, if possible.

Dr. James C. Cameron of Montreal (by invitation) spoke of cases of fibroids under his observation which had disappeared after parturition; also a case of rupture of the ureter during labor, followed by death from uræmic poisoning, which went to show that after severe attacks of pelvic inflammation all subsequent pregnancies involved danger.

Dr. Englemann of St. Louis read a paper on *A New Method of Electro-therapy and its bearing on Surgical Gynæcology*. The main feature of this paper consisted in the recommendation to *try* electricity before resorting to the knife. Dr. Englemann's views, however, upon this subject were so well known that there was but little discussion entered upon.

T. JOHNSON-ALLOWAY.

Selections.

Acute Tonsillitis.—Dr. Carl Seiler (*Med. and Surg. Reporter*) says: When a patient presents himself at the dispensary, complaining that the throat has been sore for some days, and symptoms of acute tonsillitis are present, the fauces are first thoroughly washed with my antiseptic solution. Then not only the inflamed tonsils, but the adjacent inflamed surfaces, are carefully painted with a solution of nitrate of silver, one drachm to the ounce, and the following gargle prescribed:

℞ Potasii Bromidi - - - ʒiv
Potasii Chloratis - - - ʒi
Tr. Ferri Chlor. - - - f ʒiiss
Ext. Glycyrrhizæ - - ʒi
Aquæ - - - q.s. ad f ʒiv

M. Sig. A teaspoonful in water every two hours; gargle and swallow.

In this formula there is a chemical reaction between the tincture of the chloride of iron and the chlorate of potash, by which free chlorine is liberated, and so acts as a disinfectant. The resulting iron salt is highly astringent, while the bromide, besides its local action, diminishes the reflexes and adds to the patient's comfort. After all, however, it is the argentic nitrate that relieves the suffering. It is worse than useless to apply a weak solution, as it is painful and seems to act as an irritant; while the application of a solution of one drachm to the ounce produces no disagreeable sensation, but is followed by a sense of comfort. After the application, a tenacious film of albuminate of silver forms, adhering closely to the surface (doubtless containing some undecomposed silver nitrate), and thus the astringent and sedative effects of the silver are kept up for some hours. If, after that time, the tonsils be examined, they will appear paler and smaller than when first seen. These applications are made in the dispensary once a day to patients requiring them, care being taken that none of the nitrate of silver solution drops from the cotton swab so as to get into the larynx, where it would produce severe spasm of the glottis. Sometimes a single application will effect

a cure in acute tonsillitis. In no case has it been found necessary to make over three applications, the cure being usually complete on the fourth day. At the end of ten days the tonsils, if chronic hypertrophy exists, may be removed with the tonsillotome or wire snare, or shrunken away by repeated use of the galvano-cautery, and a return of the disease in this way prevented. Unless this is done, the patient who has had one attack of acute tonsillitis will certainly have others.

The Treatment of Flatulent Dyspepsia.—Pepper, in a clinical lecture, stated that flatulence may result from the excessive formation of gas. Under these circumstances, such remedies as sulphurous acid, which is a powerful antiseptic, will be found useful. It may be given alone or combined with small doses of strychnia. He prescribed as follows:

℞ Acidi Sulphurosi, ℥iss vel ℥ij
Strych. Sulph., gr. ss
Tr. Card. Comp., ℥ss
Aquæ ad. - - ℥iv

Sig.—One drachm after meals, in water.

You may resort to a different class of remedies and give creosote. This is a local stimulant to the stomach, and in atonic cases is of service. It is at the same time a powerful antiseptic and antifermentative agent. Creosote is best given one half or one hour after meals, when the process of fermentation is about beginning. At this time the gastric digestion should have passed through the acid stage, and the contents of the stomach should be neutral or alkaline. Given at this time, the creosote may be advantageously combined with an alkali, as sodium bicarbonate.

℞ Creosote, - - gtt. x
Sodii Bicarb., - ℥ij
Pulv. Acaciæ, - q.s.
Aquæ, - - - ℥v

Sig.—Two drachms one hour after meals.

In place of the sodium bicarbonate in the above formula the subnitrate of bismuth may be employed. If it is recognized that there is not only a state of atony with a tendency to fer-

mentation, but that there is also a deficiency of gastric power, pepsin may be given. Pepsin is best taken in acid mixtures, and should be given at the acid stage of the digestion. At the same time, if the administration of the drug is postponed for a short time after meals, it comes at a time when the power of the gastric juice is about exhausted.

℞ Pepsin. fort., - - 3j
Creasot., - - - gtt. x
Bis. Sub. Carb., - 3ijss
M. Et. ft. pulv. No. xxx.

One of these powders, in a small gelatine capsule, can be given one hour after each meal. Again, in this same line of thought, we have agents, like powdered charcoal, which act as absorbents of the gases, and are, at the same time, anti-putrefactive and anti-fermentative in their action. Powdered charcoal, with soda or bismuth, may be given a couple of hours after meals, and in the class of cases of which I have been speaking, may afford a great deal of temporary relief. When charcoal is given, the patient should be informed that it will cause blackening of the stools.—*The Polyclinic.*

Anæsthesia with Chloroform and Oxygen.—Dr. Kreutzmann (*Cent. f. Gyn.*) recommends a mixture of oxygen and chloroform vapors as an anæsthetic in obstetric and surgical practice. The mixture may be made by passing freshly prepared and pure oxygen through chloroform on its way to the inhaler. Neudörfer injects a small quantity of chloroform into a balloon filled with oxygen, administering through a face piece. It is claimed for this method that anæsthesia is at once established after a few deep inspirations without the least excitement, and that there are no disagreeable after-effects, the patient awaking promptly on ceasing the anæsthetic as from a refreshing sleep.

Grafts of Chicken Skin.—G. Martin reports a case (translated from the French for *Physician and Surgeon*) of a child whose entire scalp was burned, and eight months later grafts of the skin of fowls were used with the result of obtaining

a regeneration of skin 7 centimeters by 8 in two months. In speaking of transplantations, he says: "We think that the skin of fowls, and especially of chickens, is to be recommended; it is supple, of fine texture and vascular, stretches well over the surfaces, and adheres without reabsorbing, giving important islands of epidermis which develop and spread, forming new tissue, soft and quite different from ordinary cicatricial tissue. The manual of operation which we employ in our grafts is very simple. The skin should be raised under the wing of young chickens, and should have no cellular tissue attached and no fat; the shreds should be one-half to one centimeter square; sutures are useless, the skin adhering very easily. The wound and the dressing should be rigorously aseptic. Iodoform gauze and light cotton compresses may be used." These are certainly interesting facts for the general practitioner, who often has extensive ulcerated surfaces to treat; and patients often, through ignorance of the amount of pain given in taking the grafts from the arm, decline to submit, whereas the chicken skin can always be readily obtained. We are inclined to think that this effective aid to the healing of extensive denuded surfaces is not resorted to as frequently as it should be. It not only hastens repair, but lessens the amount of cicatricial contraction which follows. Recently several operations have been reported in which the contraction that follows the healing of long-standing trachoma has been effectually overcome by transplanting mucous membrane from the lower lip.—*Digest.*

The Treatment of Bleeding from the Nose.—Wade recommends the expedient of Hutchinson. The hands and feet of the patient are placed in water as hot as can be borne. This will check the most obstinate epistaxis, without any ill consequences.—*Deutsche Med. Wochenschr.*

Muscular Rheumatism.—A case of muscular rheumatism presented to the clinic was treated by giving, internally, 20-grain doses of muriate of ammonium three times a day, and externally, a liniment containing: Aquæ ammonii, f ʒj; spirit rosmarini, f ʒiij; liniment saponis, f ʒij. M.—*Digest.*

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THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

The meeting of the recent Congress of American Physicians and Surgeons at Washington, under the presidency of Dr. Billings, was in all respects a great success. Founded on a purely scientific basis, it is fortunately free from medical politics, the bane of many medical associations. Composed almost entirely of the authors and teachers of the day, its meetings cannot fail to do much for the advancement of our profession. A very noticeable feature was the presence of a considerable nnmber of distinguished English physicians and surgeons. In future numbers we intend referring in detail to a few of the more important papers and discussions.

CANADIAN MEDICAL ASSOCIATION.

We devote considerable space in the present number to the minutes of the twenty-first annual meeting of the Canadian Medical Association, which met in Ottawa under the presidency of Dr. George Ross of Montreal. In point of attendance the meeting was fully up to the average, while in the character of the papers presented we believe that it more than held its own with any previous meeting. Time and again we have referred in these columns to the really deplorable apathy shown by too many members of the profession in not attending these meetings. We have no hesitation whatever in saying that there is not a single member of the medical profession in our whole Dominion who would not have been greatly benefited by an attendance at

the recent meeting. The stimulus that every man receives from coming into personal contact with so many and so varied minds is in itself worth all the time and trouble that it takes to attend these meetings. Probably not more than two per cent. of the profession usually attend. This is far from creditable. It is sincerely to be hoped that the efforts being made to have a good meeting at Banff next year will find a strong sympathy throughout the profession—a sympathy that will, we hope in many cases, take the shape of a resolution to be there. We would direct our readers' special attention to the president's remarks on this place as a climatic resort. It would seem that we have in our own country a place which at no distant date will rival some of the more celebrated European health resorts. Next August, then, every practitioner will have an excellent opportunity of becoming practically acquainted with the merits of Banff as a health resort and at the same time of enjoying a fine holiday trip.

PROVINCIAL MEDICAL BOARD.

The semi-annual meeting of the Provincial Medical Board was held in Quebec on Wednesday, the 26th September, the President, Dr. W. H. Hingston, presiding. After the reading of the minutes of the last meeting, a letter was read from Dr. R. A. Kennedy, one of the representatives of Bishop's College, resigning his seat upon the Board. It was announced that Dr. Perrigo had been selected by this Faculty to replace Dr. Kennedy. The following committee on Credentials was appointed, viz., Drs. Lachapelle, L. Larue, and Perrigo. The President asked for the opinion of the Board upon the application of Miss Mitchell for a license, she having recently graduated at Kingston. The Board decided that she suffered no disability, the word candidate in the law having no qualification as regards sex. The reports from the assessors of the University of Laval at Quebec and Montreal were read and adopted. The President announced that, since last meeting, Prof. Read of Lennoxville had resigned the position of examiner for matriculants, and he had temporarily appointed Mr. Hamilton Petry, M.A., in his

place. This action was confirmed, and Mr. Petry continued as such examiner. The report of the examiners for matriculants was read and adopted. It showed that 43 candidates had been received. A physician from Montreal, claiming to hold a London diploma, asked for a license. He asserted that his diploma had been burnt in a fire at Chicago. It was decided that he must produce a duplicate of such diploma. The applicant then requested the protection of the Board for six months. It was decided not to comply with this request, and to grant no permission to practice until the required document is produced before the President.

Moved by Dr. Grandbois, seconded by Dr. Rousseau, and resolved, "That this Board petition the Legislature to make such regulations as shall require any applicant seeking exemption from the requirements of the law governing the practice of medicine to furnish the opinion of this Board upon the reasons for such application."

Dr. Lachapelle read the report of the committee on Credentials, and the following gentlemen were sworn and received the license of the Province, viz.:

Laval University.—Joseph Francois Thomas Savary, Chambord, lac St. Jean; Pierre Venant Sosthène Lefrancois, Quebec; F. X. Feuilteau, Hereford, County of Compton; Joseph Samuel Poliquin, Lévis; John N. Mount, Montreal; Joseph Ed. Laberge, Ste. Philomène, County of Chateauguay.

Victoria University.—J. T. Adrien Gravel, St. Paul de Chester; Jos. Antoine Langis, Maria, County of Bonaventure; Avila Chrétien Zaugg, Montreal; Prosper O. Lauzon, Montreal; Théop. Alex. Archambault, St. Paul L'Hermite; J. Horace Chartier, Ste. Angèle de Monnoir; Louis Raymond Benoit, Chambly; Félix Laroche and Théodule Lécuyer, Montreal.

McGill University.— A. D. Stewart, Richmond; James R. Clouston, Howick, P.Q.; Robert H. W. Powell, Ottawa; D. Spencer McDougall, Russell, Ontario; A. E. Orr and H. J. Hopkins, Cookshire; Edward P. Williams, Ottawa.

Dublin Apothecary.—J. Alexander McHeay, Watford, Ont.

One graduate was refused because he had not completed the required four years of study.

One candidate was examined before the Board and rejected.

Dr. Lachapelle, the Treasurer, submitted his report from 15th September, 1887, to 15th September, 1888. Receipts were $7,491.32. After paying all expenses, there remained a balance on hand of $3,954.90. Report adopted.

Moved by Dr. Howard, seconded by Dr. Paré, that the secretary write to Mr. Lamirande requesting him for the future to make a report to each semi-annual meeting, giving the names of all unlicensed practitioners against whom complaints have been made.

Mrs. Mary Deway was examined for a license as midwife, and approved.

The meeting then adjourned.

Medical Items.

—The distinguished French chemist, Chevreul, recently attained his 102nd year.

—An International Medical Congress will assemble in Melbourne in January next, under the presidency of Mr. T. N. Fitzgerald.

—Prof. von Esmarch, the director of the surgical clinic at Kiel, spent a few days in this city on his way to attend the congress of American Physicians and Surgeons at Washington.

—The *Illustrated Medical News*, a new weekly, will shortly make its appearance. Each number will contain an original colored plate and numerous woodcuts to illustrate notes, lectures and reports of operations.

—We regret to announce the death of Prof. Rühle of Bonn, one of the most distinguished physicians of Germany. He contributed to *Ziemssen's Cyclopædia* the article on "Pulmonary Consumption." He is to be succeeded by Prof. Schultze, lately of Dorpat and Heidelberg, The latter is known especially by several able contributions to neurological literature.

—Prof. Bartholow recommends the following plan to disguise the disagreeable taste of Epsom salts: Boil for two minutes in an earthen vessel one ounce of sulphate of magnesia and two and a half drachms of roasted coffee in a pint of water.—*Coll. and Clin. Record.*

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Original Communications.

ADDRESS ON SOME OF THE RECENT ADVANCES IN SURGERY.

BY FRANCIS J. SHEPHERD, M.D.,

Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

(*Read before the Canadian Medical Association, at Ottawa, September*, 1888.)

MR. PRESIDENT AND GENTLEMEN:—When informed by our worthy President that I was appointed to deliver the address on *Surgery* before this Association, I felt that the duty might have devolved on one much more competent to treat this great subject satisfactorily; one who had the faculty of making his address interesting to every one of you. When writing me, Dr. Graham said that the address should be limited to a period of—well, say that of an ordinary sermon, and hinted that the members of the Association did not want to be lectured to. I shall endeavor, to the best of my ability, to carry out these instructions.

It is not so many years ago that Boyer, after the French war, said that "surgery seems to have attained the highest degree of perfection of which it is capable." The history of surgery, which during the past fifty years has been one of continuous advance, has proved the falsity of Boyer's opinion. During the last decade this advance has been almost phenomenal, and now scarcely a month passes without the introduction of some new operative procedure or some daring operation on cavities and

organs which have from time immemorial been regarded as sacred. The causes of this advance have been two in number—the discovery of anæsthesia and the introduction of antiseptic surgery, with which the name of Lister will ever be associated. Formerly, surgery was regarded as a mere mechanical art, and practitioners of medicine looked down upon the surgeon as one who practised a trade. How different is the relationship now. Surgery now takes the lead, and the surgeon has wrested from the physician many regions which he thought to be essentially his own. The abdomen, for a long time the hunting ground of the physician, has been almost completely surrendered to the surgeon, and with what brilliant results you all know. Certain diseases of the kidney, liver, ovaries, lungs, brain, etc., which were formerly purely medical, have become chiefly surgical; and owing to modern methods of operative treatment, many lives have been saved which heretofore the physicians let slip through their fingers as being beyond their skill to cure, though they endeavored by a copious and, it is to be hoped, judicious use of the various preparations in the parmacopœia to alleviate the sufferings of their unfortunate patients. The brain, within the last few years, has yielded not a few results to surgery which medicine has striven for in vain. The victorious advance of surgery has been positive, and the success which follows its onward course stimulates to further exertions. Still medicine and surgery are not opposed to one another, and should go hand in hand. Without the aid of the physician, many cases would escape the beneficent treatment of the surgeon; and one cannot afford to do without the other. In an address given by Prof. Bergmann before the German Scientific Medical Association in 1887, he says: "There is more or less rivalry between medicine and surgery in the cure of disease, but further progress in surgery can only take place through an increased knowledge of internal medicine. Surgeons must now avail themselves more of the accurate means of investigation which we owe to physicians—auscultation and percussion, thermometry, chemical, microscopical, and electrical investigation. As long as internal medicine remains the guardian of scientific methods and scientific principles, so long will it remain

the parent tree of which surgery is only a branch." Again: "It follows from what has been said that surgery owes all its recent development to clinical medicine, and just as antiseptic treatment is the product of careful observation in etiology, so the energetic procedures of internal surgery will have successful results only when firmly established by the methods of clinical medicine; otherwise surgery will sink, in the hands of expert specialists, to a mere display of manual dexterity." Such are the opinions of one of Germany's greatest surgeons. His warning note that surgery may degenerate into a mere display of manual dexterity is timely, for what strikes one most in reading the surgical literature of the day is, that it treats almost entirely of surgery in its operative aspects, and those departments of surgery which are not operative seem to be treated with but scant consideration. There is great danger of the surgeon becoming too limited; already there are men who profess to perform but one or two operations; they certainly do them well, but such limitation must induce a narrowness of mind which is detrimental to surgery in general, and will in the end have a dwarfing effect on the more scientific branches of surgery. It is to be hoped that this is merely a temporary condition which is induced by the novelty of invading territories hitherto but little known to the surgical traveller.

However, even if it must be admitted that surgery to-day is chiefly operative, still it is more conservative than formerly, as witness the great advance made in the surgery of the joints. Where formerly a limb was amputated, now the joint is excised or the diseased matter removed with scissors and a sharp spoon. How rarely is the foot now amputated for disease of the articulations. I have only once amputated a foot for tuberculous disease of the joints, and have always regretted it. Who would now amputate an arm for disease of the elbow, or a hand for wrist-joint disease?

But, gentlemen, I fear I am tiring you with my platitudes and generalizations, so I shall pass on and give in as brief a manner as possible an account of the recent advances in some of the more important departments of surgery. At the Toronto

meeting of the Association in 1882 it was my privilege to read the report on surgery. At that time, among other subjects, I discussed the modern treatment of wounds; since then, not much progress has been made in the treatment of wounds. The same principles laid down then are still in force—cleanliness, rest and asepticity. The dressings applied to wounds have become much simpler, and the antiseptics most relied on are soap, water and a good nail brush. Not only should the hands of the operator be cleansed with soap and water, but the parts operated on and their vicinity should also be similarly treated. Faith in germicides is being lost, and although irrigation has supplanted the spray, the solutions used have become weaker and weaker, until some surgeons use water only, especially in operations on the abdomen and thorax, where antiseptics have been proved to be absolutely injurious and often dangerous.* Sponges have become objects of suspicion; their place is now taken by the irrigator, linen, or pieces of washed gauze. The spray, which formerly was a trusted friend, a valued ally, and with some the sheet-anchor of antiseptic surgery, has been all but abandoned, and is now seen as a mere survival of a past condition. Whilst in Germany last summer, I saw in every surgical klinik the magnificent ruins of the spray-producer, looking like some old castle which marked the customs and conditions of other days. Lister himself was one of the first to give it up, and last summer at King's College Hospital he spent some time in explaining to me how especially useless the spray was in those operations on the thorax and abdomen, where it is still retained in a sort of superstitious way by some enthusiastic men. Whilst on the subject of the treatment of wounds, I might allude to one point where it seems to me practitioners in reporting cases might be more explicit. We read of a successful case of abdominal or other operation where the result was, of course, a brilliant success (how few unsuccessful cases do we read of), and the author states that the operation was performed with full antiseptic precautions. Now, what does this mean? "Full antiseptic precautions," with one

* See Senger's paper read at a recent meeting of the Berliner Medicinischer Gesellschaft.

surgeon, may mean an elaborate ritual, and with another simple cleanliness. It would be a great improvement if, when reporting cases of remarkable recoveries from astonishing operations, the reporter would state exactly the method of treatment employed to which he attributes his great success. The patient gets but little credit for the part he plays in bringing about a favorable result, and nature gets still less.

In the *surgery of the abdomen* much progress has been made. In ovariotomies and extirpations of the uterus, the mortality is being steadily diminished, chiefly by the simplification of the methods of performing the operation. Rapidity of operation and a not too elaborate "*toilette* of the peritoneum," with drainage if there be bleeding, have been most successful in reducing the mortality in these operations. Following the lead of such men as Tait, Bantock, etc., antiseptic solutions are being discarded for plain water.

In cases of *acute intestinal obstruction* it is now becoming a recognized custom for the physician to call a surgeon in consultation, and the result has been that many lives have been saved. In my opinion these cases should be placed in the hands of the surgeon from the first, as in the great majority of cases there is little hope of relief being afforded by medical means alone. Not a few cases of *intussusception* have been cured by early operations, and also many cases of strangulation due to bands, twists, etc. It is now an axiom of surgery not to let any case of acute intestinal obstruction die without at least an exploratory incision. Soon patients will be as anxious for operations in these cases as they are now in cases of strangulated herniæ. Physicians still procrastinate in cases of intestinal obstruction. They often do not advise operation until all hope of recovery has been abandoned, and operation is looked upon as a *dernier ressort*. The treatment by rest, starvation and opium has still charms for most practitioners, who are always hoping that "something will turn up." Cases of operation are reported where no cause could be found for the obstruction, and where an opening was made in the distended bowel with the best results. The artificial anus which resulted being, after some time, spontaneously closed. This

affection, in spite of operation, will always be a very fatal one until some better means of diagnosis are available before collapse sets in. On many occasions the gravity of the case is overlooked until the patient is almost moribund.

In *inflammation of the cæcum and appendix*, surgical interference has been attended in numbers of cases by remarkable succcess. It is now held by many surgeons that all cases of so-called typhlitis ending in suppuration are due to perforation of the cæcum (rare) or appendix, and that early operation in this most fatal affection is the proper procedure. In some cases the perforated bowel has been closed with sutures or the diseased appendix has been excised. The results have been most satisfactory. It has been attempted to close by operation perforations due to the ulcers in typhoid fever, with but little result; the condition of the patient and the state of the bowel itself render it improbable that much progress will be made in this direction. The operation has been performed by Küssmaul of Strassburg, Bartleet of Birmingham, and Morton of Philadelphia, with fatal result in each case.

In *tubercular peritonitis*, most brilliant results have been effected by operation. The early operations were chiefly cases of mistaken diagnosis for ovarian disease, or were doubtful cases in which an exploratory operation was called for; the good results following these mistakes led to the adoption of incision and drainage as a recognized treatment for this affection. Many remarkable cures are reported, but in the majority of cases this treatment is only palliative.

In *suppurative peritonitis*, the treatment by incision and drainage has also afforded some remarkable results, and in all cases this method should be adopted even if the cause, which is usually perforation of the intestines or appendix, cannot be discovered.

In *perforating gunshot wounds of the abdomen*, good results have been obtained by immediate operation. W. T. Bull and Dennis of New York, and Parkes of Chicago, on this side of the Atlantic, have led the way in showing the profession what excellent results may be obtained by immediate operation. Prof. N.

Senn of Milwaukee, at the International Congress held last year in Washington, read a remarkable paper on "Intestinal Surgery." His experiments were made on dogs, and he showed how gun-shot wounds of the intestines could be healed by omental grafting, with or without scarification of the serous surfaces.* Dr. Senn has also quite recently devised a method for the detection of perforating wounds of the intestines, by means of hydrogen gas insufflated per rectum; the escape of the gas from the abdominal wound can be recognized by its inflammability, and this, of course, is proof positive that the intestine has been perforated.

At the meeting of the British Medical Association held in Dublin last year, some admirable papers on the *radical cure of hernia* were read by such surgeons as Macewen of Glasgow, Mitchell Banks of Liverpool, Ball of Dublin, Barker of London, etc. The results of operations by excision of the sac and stitching up the wound were most encouraging. Macewen reported sixty-five cases operated on by his method, without a death, and only one failure. Banks, who was one of the first advocates of this method of operation, reported 106 cases; Ball, 22 cases without a death, and Barker 35. Macewen does not excise the sac, but after reducing the hernia makes use of the sac as a pad, by drawing it up through the internal ring and fixing it there. Banks, Barker, and others advise excision of the sac and fixing the stump at the internal ring, whilst Ball's method consists in torsion of the sac before excising. The open method has been advocated on this continent by McBurney of New York. French surgeons, after ligature and excision of the sac, do not advocate closing the inguinal canal by sutures, as is done by English and German surgeons. My experience in this operation has been small, but some months ago I operated on a very formidable case, the details of which I shall venture to mention. A blacksmith, aged 52, had an enormous, irreducible, scrotal hernia of the left side, from which he had suffered for many years. The tumor had become so large that he could not wear trousers or follow his occupation. He was, besides, a rather corpulent man and a hard drinker. I performed the operation

* Meeting of the American Medical Association, 1888.

for radical cure of the hernia on the 25th of April last. The sac was dissected out and opened, and the contents reduced with the greatest difficulty. The sac contained all the small intestines, the transverse and descending colon, and the sigmoid flexure, together with a large mass of omentum. Nearly two pounds of the latter were excised, and it was only by suspending the patient by his heels (a suggestion of Dr. Bell's) that I was enabled to reduce the protruded bowel. The intestines had not been in the abdomen for some years, and that cavity now seemed too small to contain them ; and when, after an hour and a half's exertion, the intestines were all returned, the abdomen was as tense as a drum. The sac was excised and the stump fixed to the internal ring according to Barker's method, and the canal closed by suturing the conjoined tendon to Poupart's ligament. The patient made an excellent and uninterrupted recovery, and is now pursuing his occupation as a blacksmith with comfort. I saw him a week ago, and there was not the slightest tendency to a return of the hernia.

In the victorious advance of surgery the *liver* has not escaped. Langenbuch of Berlin has successfully resected the greater part of the left lobe, and Dr. Dalton of St. Louis, and Prof. Postempski of Italy, have successfully sutured the liver for gunshot wound and stab wound respectively. Hydatid cysts have been frequently and successfully evacuated.

The *surgery of the gall bladder* has been making steady and uninterrupted progress. Lawson Tait has reported no less than thirty cases of operation on the gall bladder, with one death. He differs from Langenbuch of Berlin, who prefers excision of the gall bladder to incision and drainage. Mr. Tait says*: "The more experience I have in dealing with these cases the less necessity, it seems to me, arises for anything more than the simple process of cholecystotomy, and the extremely favorable results obtained from it put it in the first rank of modern operative procedures." Diseases of the gall bladder are among those affections which should be looked upon as surgical, and which the judicious practitioner should treat as such. In some cases

* Lancet, April 14th, 1888.

of obstruction from gall-stones, the gall bladder is shrunken and can be with difficulty brought to the surface. It is often difficult to say whether a case of obstruction of the common duct is due to impacted calculus or malignant disease; when the cystic duct alone is obstructed there is no jaundice. In doubtful cases an exploratory incision is now considered justifiable. When the gall-stone has escaped from the common duct it may still prove a source of danger. Obstruction of the intestine due to gall-stone is more common than is supposed; a small stone may cause symptoms of complete obstruction and consequent death. Such cases should be treated by early laparotomy. It is not necessary to incise the bowel to free the stone, for it may be passed on through the ileo-cæcal opening by external manipulation, as has been done by Mr. Clutton of London, or broken up *in situ* with a needle, as recommended by Mr. Tait.

The *stomach* has been frequently successfully opened for the removal of foreign bodies, or the performance of Loreta's operation of dilating a contracted pylorus; operations of excision of malignant growths of the stomach are not growing in favor, the game, as a rule, is not worth the candle. The *pancreas* has been successfully operated on for cystic disease, and the *spleen* has been so frequently successfully excised that the subject is no longer a matter for wonderment.

We come now to the *surgery of the kidney.* Since Simon first extirpated a kidney in 1869, great advances have been made. The surgery of no other abdominal organ has been so rapidly developed and perfected. No doubt many kidneys have been removed unnecessarily, and too often, unfortunately, with a fatal result; but surgeons are now beginning to see their way more clearly in this, until recently, little known branch of surgery. It is now a well established rule that no kidney should be removed without a previous nephrotomy or exploratory incision. Again, no kidney should be removed until the condition of its fellow is ascertained. Several cases are on record where the surgeon has removed the only kidney in the patient's possession. A preliminary nephrotomy enables the surgeon to avoid this fatal mistake. The most brilliant results have been obtained

in the operation of *nephro-lithotomy*. During the past year Mr. Jordan Lloyd* of Leeds, England, has introduced a method of exploration of the kidney which is a great improvement on the old needle puncture. He advises puncture of the lower end of the kidney with a long-bladed tenotome in a direction upwards and inwards till the lowest of the calyces is reached; a small, short-beaked child's bladder sound is then introduced, and the calyces and pelvis explored. In June last I had an opportunity of putting Mr. Lloyd's method into practice, and found it a simple and admirable one. The patient had been subject for several years to attacks of renal colic; latterly the pain had been continuous, and was located in the left lumbar region and down the course of the ureter; great pain was felt on pressing over the left kidney. He had never had any blood or pus in his urine. Knowing the comparative harmlessness of the operation of nephrotomy, and having had experience in several other cases, I determined to cut down on the painful kidney and examine it. When the kidney was reached the exploration was made with the greatest facility and with but little disturbance of the parts. After incising the lower end of the kidney with a bistoury, the short-beaked sound was introduced and the pelvis and calyces of the kidney thoroughly explored, but without result; no stone was found. The hemorrhage from the kidney, which was free, was easily controlled by pressure. The wound was closed and a drainage tube placed at its lower end. Urine ceased to come from the wound after the second day. In ten days the patient was out on the gallery, and in two weeks the wound had soundly healed. The pain which previously had been most intense was much relieved, and has since almost entirely disappeared. When last seen the patient was attending to his work and looked strong and healthy. I might mention that a woman from whom I removed a kidney in September, 1884, for calculous pyelitis, is still alive and in good health, and since the operation has given birth to three healthy children. Another operation which is finding favor in the eyes of surgeons is *nephrorrhaphy* or fixation of a floating kidney. Removal of the kidney was formerly prac-

* Practitioner, September, 1887.

tised for the relief of the pain and inconvenience of a floating kidney; the substitution of nephrorrhaphy for nephrectomy in these cases is a decided advance, for the former operation is a much safer as well as a more scientific one.

In the *surgery of the bladder* progress has also been made, though not to the same extent as in that of other abdominal organs. Tumors of the bladder are now successfully removed, and Guyon of Paris and Thompson of London have done excellent work in this direction. The introduction of the electro-endoscope has much facilitated diagnosis. The old supra-pubic operation is now the fashionable one for the removal of stone from the bladder, and it is being practised largely everywhere. The operation has been much improved by the introduction of Petersen's rectal bags and the practice of moderately distending the bladder before operation with an antiseptic solution. The operation is suitable for cases of large and hard stones, and for the removal of tumors and foreign bodies, but it will no more supplant the old operation of lateral lithotomy than did lithotrity. In some cases of stone in the bladder, Mr. Reginald Harrison* of Liverpool justly remarks, "it is necessary to do something more than merely remove the stone. In cases of cystitis with enlarged prostate where stone has formed, removal of the stone is necessary, but it is also necessary to prevent further formation by getting the bladder into better condition." The bladder, says Mr. Harrison, is like a chronic abscess with a stone in it, and it is quite as necessary to drain the one as the other. These cases are unfit either for supra-pubic lithotomy or lithotrity; but the lateral operation provides an excellent means not only for the removal of the stone but of after-drainage of the bladder. Ruptured bladders have recently been *successfully treated by abdominal section* and suture of the bladder rent. An early diagnosis is, of course, important in these cases.

I fear I have already exceeded my allotted time, and although many other subjects of intense interest to the surgeon might be touched upon, yet I feel constrained, for the remainder of my address, to confine myself to giving a short account of the re-

* Lettsomian Lectures, 1888.

markable advance which has been made during the past two or three years in the treatment of various *diseases and injuries of the brain and spinal cord* by surgical operation. Brilliant results have been obtained in this department of surgery—results which, a few years ago, would have been looked upon as Utopian. The operation of trephining the skull is a very old one, and was frequently and often unnecessarily performed by surgeons in the early part of this century. I have heard that it was quite the fashion for Dublin surgeons to have their pockets full of buttons of bone which had been removed with the trephine from the skulls of pugnacious Irishmen. However, the surgeons at that time only trephined for injury, and their explorations did not extend further than the dura mater; it was considered injudicious and dangerous to interfere with the brain itself, not, as in earlier times, from superstitious motives, but owing to such interference being followed by fatal inflammation. It is only with the introduction of antiseptic surgery, and a more accurate knowledge of the localization of brain functions that the brain itself has been interfered with. Our knowledge of the functions of the brain has been greatly extended by the researches of such men as Broca, Hughlings Jackson, Fritsch and Hitzig, Goltz, David Ferrier, Yeo and others. The observations of these investigators chiefly go to prove that many areas in the brain are connected with separate and distinct functions. It was found that if these areas on the surface of the convolutions were stimulated electrically, distinct movements were excited in certain groups of muscles on the opposite side of the body. These facts were not discovered all at once, but were the result of prolonged clinical observation and careful experiments on the brains of animals. Many cases of severe injury to the brain have been saved in the past by early trephining. Abscesses of the brain following injury have been frequently opened successfully. Again, many cases of epilepsy due to injury have been cured by trephining over the spot injured; but it is only quite recently, in fact only since the truth of the theory of Broca's localization has been established on a firm basis, that operations have been undertaken where there was no external indication of injury or

disease. The lesions have not only been successfully diagnosed, but the brain and its membranes have been incised without resulting in fatal inflammation. It has been clearly shown that inflammatory conditions following operations are due to sepsis. If the wound be kept aseptic the case does well. Dr. Macewen of Glasgow, an old pupil and house-surgeon of Lister's, noticed that cases of severe injury to the skull, with extensive loss of cerebral substance, were quite amenable to treatment, and exhibited no tendency to inflammatory action as long as the tissues were kept aseptic; hence, he said, if such injuries can be recovered from, how much more likely is recovery from a carefully planned operation. His first case was in 1876 for abscess, which he diagnosed to be in the vicinity of Broca's convolution; operation having been refused during life, he was permitted to trephine over Broca's convolution after death; the abscess was found as diagnosed and easily evacuated. In 1879 Dr. Macewen successfully evacuated from beneath the dura mater of a boy, who had previously received an injury of the head, some fluid which had collected there and had given rise to convulsive seizure of arm and leg. In the same year a tumor of the brain was diagnosed and successfully removed from the frontal lobe of a woman, who lived for eight years after and then died of Bright's disease of the kidneys. Up to 1884 Macewen had operated on seven brain cases, with one death, a case of abscess of the temporo-sphenoidal lobe. In December, 1884, the first case of tumor of the brain was operated on in London, having been previously diagnosed by Dr. Hughes Bennet, and removed successfully by Mr. Rickman Godlee; the patient lived four weeks relieved of his previous symptoms, and then died from septic complications. The report of this case, at a meeting of the London Medico-Chirurgical Society in May, 1885, gave rise to a most interesting and important discussion, in which Drs. Macewen and Ferrier took part. Dr. Macewen related several cases on which he had successfully operated, and mentioned his method of reimplanting the removed disc of bone. Up to this time MacEwen had operated on seventeen cases for the relief of cerebral pressure and other brain lesions. At the Brighton

meeting of the British Association in 1886, Mr. Victor Horsley excited the admiration of the meeting by his remarkable paper on the *Advances in the surgery of the central nervous system.* In this paper he minutely detailed his method of operating, and showed how, if performed carefully, the brain might be incised and tumors removed without any great risk to the patient. His experience was chiefly derived from operations on monkeys. He also showed three patients on whom he had successfully operated (one for tumor and two others for scarring of the convolutions, causing epileptiform fits). Since this time operations on the brain have become comparatively frequent for epilepsy following injury, for abscess of the brain (especially that form connected with suppurative disease of the ear), and for tumors. On this side of the Atlantic, Drs. Keen and Roberts of Philadelphia, and Drs. Weir and Seguin of New York, have done good work. Dr. Keen has recently successfully reimplanted, in one piece, the bone removed by the trephine.

At the recent meeting of the British Medical Association in Glasgow, Dr. Macewen read an epoch-marking paper in the surgery of the "Brain and Spinal Cord." He related how for years he had been working at this subject, and with what great results. His paper is certainly a wonderful contribution to surgical science. He says: "Of twenty-one cerebral cases (exclusive of fractures of the skull and other immediate effects of injury), in which operations have been performed by me, there have been three deaths and eighteen recoveries. Of those who died all were *in extremis* when operated upon. Two were for abscess of the brain, in one of which pus had already burst into the lateral ventricles; in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which, besides a subdural cyst over one of the hemispheres, there was extensive softening at the seat of the cerebral contusion in the opposite hemisphere, accompanied by œdema of the brain. Of the eighteen who recovered, sixteen are still alive, in good health, and most are at work; leaving two, who have since died, one eight years after the operation from Bright's disease, the other forty-seven days after operation from tubercular enteritis."

These results are certainly remarkable, and very encouraging as to the future of the surgery of the brain. I had the pleasure last year, while in Glasgow, of seeing some of Dr. Macewen's cases, and some were most interesting. In one case the diagnosis of the lesion was made from sensory phenomena alone, and successfully operated upon. Notwithstanding the success of such men as Macewen and Victor Horsley, operations on the brain should not be rashly undertaken. Each case should be studied on its own merits, and the surgeons who attempt these operations need not only experience in general surgery, but an accurate knowledge of motor and sensory phenomena in connection with the localization of the functions of the brain.

Dr. Macewen's name is also associated with the surgery of the spinal cord; he has operated on no less than six cases. In all, the posterior arches of the vertebræ were removed; four to relieve paraplegia, caused by pressure from connective tissue neoplasms and displacements of the vertebræ due to caries or traumatism. Out of the six cases operated on four were successful and two died. The first case was operated upon as early as 1882. Mr. Victor Horsley successfully removed a tumor, diagnosed by Dr. Gowers, from the posterior end of the nerve opposite the third dorsal vertebra. The patient suffered from paraplegia. He completely recovered, and was shown to the London Medico-Chirurgical Society, January 24th, 1888. I have frequently trephined the spine in the dead subject, and I can say that the operation itself presents no great difficulties. The cases which call for this operation are, however, rarely met with.

There are many other interesting subjects on which it might be profitable to dwell, such as intubation of the larynx, re-implantation of bone, transplantation of the eyeball and conjunctiva, new theories as to the cause of inflammation, tetanus, etc., surgery of bronchocele, surgery of lungs, joints and many others, but time will not allow me to more than mention them.

INTRODUCTORY ADDRESS

Delivered at the Opening of the Fifty-Sixth Session of the Medical Faculty of McGill University, October 1st, 1888.

By James Stewart, M.D.,
Professor of Pharmacology and Therapeutics, McGill University.

Our meeting to-day is to formally open the fifty-sixth session of the Medical Faculty of this University. Since the opening of this school sixty-four years ago, great and many have been the changes. From small beginnings, we have arrived at a position which is naturally a source of pride to each and all of us, to not only the goodly array of you undergraduates, but to the thousand graduates who are scattered far and near over the earth.

Sixty-four years is a long period in the history of man. It nearly represents the active professional life of two generations of men. It would be instructive to contrast the state of medicine in 1824 with what it is to-day. Such a record would be an account of an amount of brilliant work which far exceeds in importance all the advances made from the time of the old philosopher of Cos to the beginning of the present century. However interesting such a contrast would be, this is hardly the place to direct your attention to it. Before you graduate you will have had many opportunities of becoming acquainted with what has been the progress of medical science.

In the few minutes which I intend to occupy to-day, I prefer rather to make a few general observations which, although rather threadbare, will, I trust, be of use to many of you during your course through this University.

Introductory lectures are difficult undertakings. It is impossible to say anything that is new. The ground has been run over so often, and by so many able men, that there is really little new in a general way to present. However, even at the risk of being tedious and uttering platitudes, I desire to direct your attention for a short time to some thoughts that have been uppermost in my mind since I was made aware that the choice of addressing you had devolved upon me.

My first duty is a pleasant one. It is to bid you all a cordial welcome in the name of my colleagues and myself. To those of you who are this day commencing the study of medicine I would desire to address a few words especially. You are now entering into a study, the greatness and vast importance of which it is, I am sure, impossible for any of you to adequately comprehend. It takes a long, long time for the average medical student to awaken to the vast responsibility he is shouldering. Some students, unfortunately, never attain to that point. Many practitioners go through life without ever attaining it. Without its attainment you can never reach the higher levels of professional life. I congratulate you on the choice you have made. If true to yourselves, the choice is a wise one. When I look about me among my lay acquaintances and neighbors, it is with a considerable degree of complacency and satisfaction, for there are few, indeed, that I would willingly exchange places with. Although Medicine is a hard mistress, still she gives in return that which neither riches nor titles can buy or obtain. To he who practices his profession with all his heart and soul, there is returned to him a double interest—there is the great humanizing interest and the scientific interest, both of an ennobling character. Although there is naturally in the practice of our profession much to see that shows the weakness and frailty of man, there is, on the other hand, much that is pleasant and much that is ennobling. It is difficult for a laymen to understand the great interest that attaches to the practice of medicine. He cannot understand what pleasure there is in the observation of what we call "interesting cases." He lacks what we call the scientific spirit. Unfortunately it is not uncommon to find members of our own profession sadly lacking in this respect. Their state is not to be envied. They go through life practising a low art, for, remember, we can make our work either a low art or a high scientific calling. It is all dependent on ourselves. Which of these two roads is to be your pathway through life. Now is the day and now is the hour for you to decide this momentous question. Just as the boy is the father of the man, so is the student the father of the practitioner. The character of your work

during the coming session will, in all probability, be the character of your work in the years that are to come. How very few students see further than their examinations. Examinations at best are only necessary evils. If teachers were only able to inspire their students with such a love for their work that they would perform it for its own sake, examinations would be unnecessary. Unfortunately, however, this is far from being the case. It certainly can never be reached while the present pernicious system of general education is in the ascendant. It is no exaggeration to say that few teachers in our public and higher schools grasp the true aim of education. The character of the material that they send forth is the proof of this. While governments pay by immediate results, so long will this bad system continue, and so long will we have to do with men for the professions who cannot grasp the true ideal.

If, while you are pursuing your course through this University, we are enabled to infuse into you an abiding love for your work for its own sake—if we have been able to make you catch the true scientific spirit, we know all will be well. If we only accomplish the feat of enabling you to merely pass your examinations, then our work has been a failure indeed. No matter how brilliant an examination a man may pass, if he has not acquired the genius, it may well be called of being a student for the rest of his career, all his hard work is of little use indeed. Here it may be said that it is not uncommon to find the really brilliant students fail. I know of numerous instances where a brilliant student career has ended on graduation day, simply because these men were never real students; while on the other hand, I have seen many who passed their examinations with difficulty, but who, having acquired an intense love for their work, start forth with renewed vigor, and in a short time distance in the battle of life the showy companions of their college course.

You will readily understand the great responsibilities that rests on your teachers. Our aim is that you should all leave us deeply imbued with that abiding interest in your work which will make you all students in the highest sense of that term for

the rest of your days. To attain this much to be desired end, it is necessary that we should have your fullest confidence. There is much to encourage us, for when we look at the long list of men that have graduated here we know that many of them are still students. The greatest compliment I ever heard paid to the Medical Faculty of this University was from an observant medical practitioner, a graduate of another school. He said that he had time and again observed that graduates of McGill were enthusiastic lovers of their work. An institution pervaded by such a spirit will do work of the highest character. Such influences are not confined to the lives of its individual teachers, but go on for untold generations. It is this far-reaching influence that makes the responsibilities of your teachers so great. Every lecture, every demonstration, and every clinic leaves an impression which will never fade. We claim from you the fullest confidence that in what we do we are doing it solely for your good and future usefulness. Between teacher and student there should be an active co-operation. The day is now fortunately past when a student, especially a medical student, looks upon his teachers with distrust. We are all students. We are all striving towards the same end—the lessening of human suffering.

There should always exist among us that *esprit du corps* which is so characteristic a feature of university life here. Many are inclined to underrate the influence of this brotherhood, but I feel certain that it is a great factor in the building up and perpetuation of good and honest work. It can be compared to the remarkable brotherhood that exists in many of Her Majesty's regiments, especially the Highland ones. What but their *esprit du corps* have made these regiments excel in many a field Spartan valor. Sooner than bring a blot on the glorious record of the past they would die to a man.

I need hardly tell you that your opportunities here are great. Value them and make use of them. Work so now that in the future there will be no regret on your part of not having made use of them. Time and again have I heard medical men regret the opportunities lost while attending college. They would give

a great deal to be able to go over the same ground again. It is only by making use of your opportunities here that you will be enabled when you are cast adrift to do good work. No matter how small may be your field of work, you have opportunities of doing something for science. It is a great mistake to suppose that the great medical centres are the only fields for the cultivation of medical science.

It is usually the custom of those entrusted to deliver introductory lectures to make use of the occasion to say something about, and urge the importance of, their own special subject. I am in great measure relieved from this pleasant duty, for it is pretty well conceded that pharmacology and therapeutics stand in no need of defence. Their importance cannot be denied. In fact they are the end of all the subjects in the curriculum—all other subjects are simply a preparation for the application of agencies to the treatment of disease. The ultimate object of the subject is to teach the legitimate use of means to an end. "The centre around which the lectures are grouped is the physician's prescription. From the utmost verge of the subject, the thread upon which it hangs leads back to the prescription, not of drugs only, but of everything that can alleviate suffering and cure disease. The ultimate end of medical education is to teach how to write a prescription, and in that little act lies the severest test of a physician's attainments. To be examined upon a prescription is to give access to every department of medical learning. If the student could satisfactorily explain the *how*, *what*, *when* and *why* of prescribing, his education would be complete; but this is not to be obtained during his curriculum merely, it is what the practitioner is still learning at the close of his career. The practical application of all the medical sciences culminates in the prescription; the ultimate object of chemistry, botany, physiology, pathology and the other allied sciences with respect to medicine is to teach the physician how to apply the remedies at his disposal most advantageously to his patients." Pharmacology and therapeutics is, as it were, surrounded by the medical sciences, so that in whatever direction we may advance we shall find ourselves approaching towards one or other of them.

It is not uncommon to meet even with very distinguished members of our profession who deride in very general terms the use of drugs in general. This incredulity was born in the days when empiricism swayed the medical profession. In the past nearly every form of therapeutic absurdity imaginable has been tested, and often with alleged benefit. Even to this day many people can be found who have a firm faith in homœopathy, the faith cure, and other similar delusions. It is not surprising, then, that there are therapeutic nihilists in the profession. The Vienna school, with Skoda at their head, have wielded an immense influence in perpetuating these errors, not only on the continent of Europe, but throughout the whole world. Skoda was a distinguished physician, who lent all his great talents to the refinements of physical diagnosis, almost completely ignoring both general and special therapeutics. Strange that his chair should now be occupied by a man equally distinguished, and at the same time one of the ablest and soundest of modern pharmacologists. His great influence has already been felt in the very stronghold of therapeutic nihilism. I refer to Nothnagel.

There is a subject of great importance to us here in Canada that I desire to say a few words on. It is the relation existing between the Medical Boards of the different Provinces and the teaching Universities and Schools of Medicine. Every candid observer must admit that there were strong reasons for the institution of the Ontario Medical Board. Whether the motives that actuated the originators of this board were high or not, I am not in a position to judge, but there is no doubt whatever that its establishment has been the means of elevating professional education and the tone of the profession in that Province. This despite the fact of the unholy alliance they entered into with the homœopathics and eclectics. What I wish to direct special attention to is this: that in more than one direction all our Provincial Boards are drugs on the wheels of medical progress. Owing to their narrow policy, progress in the teaching at the University and schools is greatly retarded. All our Canadian Boards require two courses of six months each of the following subjects: Anatomy, Practical Anatomy, Physiology,

Theoretical Chemistry, Materia Medica and Therapeutics, Principles and Practice of Medicine, Principles and Practice of Surgery, Midwifery, Clinical Medicine, and Clinical Surgery ; two courses of not less than three months each upon Medical Jurisprudence, and so on. Now if we compare those requirements with those, say, of the University of Edinburgh, we will find a very marked difference. I take the University of Edinburgh because it is universally allowed to be among the first of the teaching bodies in Great Britain. The following are its requirements : One course of one hundred lectures on the following subjects : Anatomy, Practical Anatomy, Chemistry, Materia Medica, Physiology, Practice of Medicine, Surgery, Midwifery and Gynæcology, General Pathology ; two courses on Clinical Surgery and Clinical Medicine ; and one course on Practical Chemistry, Practical Materia Medica, Practical Physiology, and Practical Pathology. Now you will at once notice the marked difference there is between the requirements of these different bodies. While Edinburgh requires only one course of purely didactic lectures, our Provincial Boards require two. Now, I would not like to go so far as to say that the Edinburgh curriculum is a perfect one and that of the Canadian Boards all imperfection. There can be no doubt whatever that in the main Edinburgh is right and our Boards are wrong. There are several subjects where one course is all sufficient to present the matter to the student. In this list I would name Descriptive Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Surgery and Midwifery. I hope you have noticed that I have included my own subject in the list of those I would like to see cut down. The only subject in the list of so-called didactic subjects which I think demands two courses is that of the Principles and Practice of Medicine. The subject is now such a complicated and vast one that it is quite impossible to present even its salient features in one course of six months. To put it practically, a word that is especially dear in this utilitarian age, it is your future " bread and butter" subject.

If we pass on to other subjects, I am sure you will all admit that one course on descriptive anatomy is sufficient for the full

presentation of that subject. This, with two courses of practical anatomy, would surely even satisfy the most exacting. As to physiology, one general course is quite enough. This, with a course on practical physiology as now conducted by Prof. Mills, would cover the ground very well.

You will all readily admit that one course of theoretical chemistry would be sufficient for the already over-burdened student. As to materia medica and therapeutics, the course should be divided up into pharmacology, clinical therapeutics, and practical materia medica. I would be quite satisfied with a three months course on general pharmacology, a three months course on practical materia medica and experimental pharmacology, and a weekly lecture in the hospital on general therapeutics. To a certain extent I am glad to say that I am able to adopt this arrangement and still keep up to the requirements of our Boards. I feel confident that before many years this or some similar plan will become general.

One course of didactic lectures on sugery, in addition to two courses of clinical surgery, is sufficient even for this important subject. If anything is to be added, let it be on clinical surgery and not on the general lectures.

The importance of midwifery surely demands that it should be treated as liberally as either medicine or surgery. There should be clinical midwifery; by that I do not only mean the usual attendance on six cases of labor, but the regular clinic at the bedside of the lying-in woman, after the manner instituted by Dr. Cameron in the Montreal Maternity. One or two courses of clinical midwifery, with one course of didactic lectures, would certainly be superior to the requirements at present demanded by the Boards, which consists simply of two courses of didactic lectures and the simple attendance on six cases of labor. There is no such requirement as clinical midwifery in the sense that this is now understood.

For what reason two courses of three months each in different years on medical jurisprudence should be required passes my understanding.

Now, a number of our Boards err in the opposite direction in

regard to the all-important subject of general pathology. It would appear from their requirements that it is not necessary to be acquainted with this subject at all, except in so far as it may be treated of in the other subjects of the course.

I have not done yet finding fault with our Boards. Among the subjects a student is required to attend his first year are Anatomy, Chemistry, Physiology and Materia Medica. As far as anatomy and chemistry is concerned, this arrangement is all right, but as for physiology and materia medica it is all wrong. To take materia medica first, a student is required to attend lectures on a subject which deals with the actions of agents on organs and tissues, the anatomy and physiology of which he is entirely ignorant of. Fortunately, here we have been able to get rid of this difficulty by making materia medica a second and third year subject. But how long will it be before a similar change will become general in this country ?

Take physiology again—a subject of intense interest and fascination—the very groundwork of scientific medicine. Now it for the most part consists in the application of chemistry and physics to the study of life, and yet the student is required to take up this subject before he has had a training in either physics or chemistry. If the subject was first entered during the second year, how much easier would it be for both teacher and student. Coming as it does in the first year, it seriously interferes with both the teaching of chemistry and anatomy.

Now, how are all these faults in our Boards to be remedied ? How are these wrongs to be righted ? The teaching bodies are powerless in the matter. In fact, any representation for a change in the curriculum of studies from such a quarter is looked upon with suspicion. For the most part, the Boards are composed of men who are not teachers, and who, consequently, are not in a position to judge of the needs of students. Many of them argue in this way: the more lectures the longer the courses, the fewer men there will be to graduate. I am sure that if here in McGill we had our own way in these matters it would not be long before these abuses would be swept away, as far as we are concerned. We are hoping for better things, and much depends

on our graduates. If, after leaving us, they would move collectively in this matter, I am sure the desired changes would soon come about. Come sooner or later they must.

It is far from creditable to the medical men of this country that such a state of affairs should be in existence. When we consider how much there is to know in medical science, and, after all, how little any one man can know, be his talents and industry of the highest order, it is surely our bounden duty to see that at any rate no obstacles are placed in the way of the student. It has recently been computed that upwards of 25,000 original medical articles are published yearly; this is about the rate of seventy articles a day, being more matter than ten ordinary men can even read, let alone digest. This will give you an idea of the enormous activity in the medical world, and yet you are supposed to know almost everything when you graduate. At the great congress which met in Washington two weeks ago, no less than fourteen special medical associations were represented. So specialized was the work in many of these sections, that the work of one section was frequently unknown ground to the members of another section. An attempt was made to have general meetings, where all might be interested. This proved a great success as far as the general interest that it excited, but I question very much whether, after all, there was an intelligent following by many, of the subjects discussed. It is hard to conceive how the laryngologists, or the gynæcologists, or the orthopædists, or the genito-urinary surgeons could intelligently follow the discussions on cerebral localizations. To many of them the discussion must have been about as intelligent as it would be to a well educated laymen.

I will not pursue this subject any further, as I do not wish to enter into the large subject of specialism. I have only referred to it in order to give you a glimpse of the great profession that you have now entered, and to direct the attention of the profession at large to the fact that the students of this country are seriously handicapped by the regulations of the Provincial Medical Boards. It is a great mistake to hamper the teaching bodies. If medical education is to progress, it is essential that they should

not be subject to the will of every budding medical politicia
In this University we especially, I think, feel the obstructi
influences of the Medical Boards. We are not only the olde
medical school in Canada, but the most progressive. At prese
as in the past, our curriculum has been ahead of all others.
is, in fact, frequently copied by our neighbors—a sign which
are pleased to see, for you all know that "imitation is the si
cerest flattery." Depend upon it, we are not going to re
Our motto is "Ever onwards! Ever upwards!"

I will now conclude what I have to say by reminding y
that the years of your probation here will quickly pass awa
and that soon you will be called upon to go forth to join t
ranks of those who are battling with disease. Great is the fie
of labor, and every true and honest workman is welcome therei
The contest is a great and very unequal one, but every day
is lessening. Every day the light of science is brighter. Ma
it be your part to aid, however humble, in making it still brighte
but to do this you must—*work!* Then "work while it is call
to-day, for the night cometh when no man can work."

INDICATIONS FOR, AND COMPARATIVE MERIT OF, EMMET'S AND SCHRŒDER'S OPERATION ON THE CERVIX UTERI.*

By T. Johnson-Alloway, M.D.,

Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montre General Hospital; Gynæcologist to the Montreal Dispensary.

(*Read before the Canadian Medical Association, at Ottawa, September*, 1888.)

Mr. President and Gentlemen,—To Marion Sims uterin surgery owes its birth, and to the genius of such men as Emm on this continent and Schrœder in Europe it is indebted for i advancement to a high position in surgery. And it does n therefore seem strange that the names and energies of these tw latter gentlemen should be associated with a certain definit morbid condition of the cervix uteri in their respective meth devised for its relief.

There is not a procedure better known, or one on which the has been more written, than E[illegible]

* Clay models of operations were ex[illegible]

it has, in the past, occupied so much attention in our local societies and medical journals, that at present the majority of us are feeling somewhat inclined to give it a little gentle rest. It is on this continent, however, that it has substantially flourished, but even here, Noeggeroth, after adopting it as part of a lifetime's work, tells us in his declining years of pensionhood that it is not at all necessary. But, gentlemen, we must not mind this strange and unnatural reversion of opinion under such circumstances; the present generation of uterine surgeons has experienced of late another example of such reversion of opinion under similar circumstances.

In England and France, the non-appreciation of Sims' speculum has conduced to perpetuate a feeling of conservatism which we look upon as being so inimical to the advancement of scientific uterine surgery, and which has accounted, in a measure, for the lukewarm acceptance of the benefits of trachelorrhaphy in these countries.

In Germany, however, Simons' perineal retractor has opened up to these original investigators a vast field of information in regard to operations upon the uterus.

And what Sims' instrument did in America towards making possible operations upon the uterus through the vagina, Simons' instrument led the way to similar work in Germany. To the respective merits of these two instruments, as perineal retractors, do we owe the recent advances made in uterine surgery towards the alleviation of much suffering otherwise inseparable from the function of reproduction.

I have introduced in a passing way the application of these two perineal retractors, because I think the advantages which Simons' instrument has over Sims' in operations upon the cervix should be co[illegible]. [illegible] principal advantages consists in the al[illegible] [illegible] instrument we can render [illegible] before the operation [illegible] a continuous [illegible] perf[illegible] [illegible] and even

at present in some large centres, sterilizing of the passages is delegated to the hospital nurse, prior to the patient being placed on the operating table. Dr. Brooks H. Wells, of New York, has shown by a carefully-prepared statistical table that in the practices of fifteen of the most eminent specialists in America, no less than 43 cases of pelvic imflammation and 6 deaths had occurred following the performance of so simple an operation as trachelorrhaphy, and surely so appalling a record should cause us to pause and enquire for a cause. Imflammation following operations upon the cervix are by some attributed to traction upon the pelvic floor, but this I look upon as a myth, and can accept but one real cause—*infection from without*. I do not believe there is ever sufficient traumatism produced in connection with operations upon the cervix to set up inflammatory action either in the wound itself or in the parametral tissue adjacent to it.

In considering the indications for an operation upon a lacerated and otherwise diseased cervix I will not take up time with the matter, the full digest of which we are all here acquainted; but I would like, sir, to lay before yourself and the gentlemen present the consideration of a few ideas which have originated during careful thought, in my endeavour to improve wherever experience prompted the necessity for such improvement. It is in this way only that we can obtain comparative evidence of sufficient value to enable us to draw logical conclusions. In regard to trachelorrhaphy for lacerated cervix, I found after I had done many cases that so long as I had to deal with a simple ununited cervical wound, free from areolar hyperplasia, displacement, chronic parametritis and perimetritis, chronic endometritis with cervical catarrhal patches, and other pathological conditions accompanying such a lesion, a simple trachelorrhaphy after Emmet's method produced the most promising results. And many of such simple cases were found to have been ladies who were told by their physician that they had a slight tear in the neck of the womb, and that if they took rest in bed, hot water douches and other palliative methods of treatment they would get better of their

s, and that eventually they could bear an operation done at
› more convenient time. No better advice could possibly
ı been given, and no better course of treatment could have
carried out. In fact, all the good had been done by the
›nt's family physician, and the special surgeon found a
:nt, as a supplicant to him, to do a certain operation upon
cervix. Then, again, we meet with cases which are of
nt origin, that is from six to twenty months after delivery,
where the principal symptoms are reflex neuralgiæ, extreme
ity and hemorrhagic endometritis. In these cases it is
necessary to readjust the torn edges of the cervix and
:ce the necessary rest to favor more complete involution.
e latter patients sometimes became neurasthenic, take on
ıge hallucinations, think they have heart disease, cancer,
ıan, or some obscure disease with which they say we are not
iar, and therefore, from which they can get no relief.
helorrhaphy sometimes acts like a charm upon the mental
ition of such patients, but occasionally altogether fails, or
places them in a worse state. To repair the cervix here,
›ver, is quite right, but the recovery of such a patient
nded more upon a form of treatment outside of our present
e.

ıese few broad illustrations, gentlemen, of the more fre-
tly met with cases wherein Emmet's method of simply
ring the cervix to its original form, will partially serve our
ose in my endeavours to show the leading indications for
procedure.

e will now, gentlemen, pass on to consider another morbid
ition of the cervix very often associated with laceration,
ein Emmet's operation does not succeed in giving relief.
ıis class of cases we have extensive catarrhal disease of the
›sa, with ectropion and general hyperplasia of the injured
es. Schrœder claims that the catarrh does not depend
the laceration, but the reverse—that the laceration is due
e catarrhal disease. I am inclined to think that Schrœder
› a certain extent, undoubtedly right. Catarrhal disease
; tend to destroy the integrity of the elastic properties of

the cervix, and also to prevent union of the torn tissues during the puerperium. Again, how frequently do we meet with cases of most extensive catarrhal disease in women who have never been pregnant, and we sometimes see the catarrhal patch occupying the whole of the portio-vaginalis, extending as far back as the vaginal junction. So that, given, a case of bilateral laceration, extensive ectropion, chronic catarrhal inflammation of the endometrium, formation of retention cysts, and connective tissue hypertrophy, I say that Emmet's trachelorrhaphy is incorrect and unsuitable, and will not give relief. The reason why the operation is unsuitable to such a case is very obvious, and can be explained in this way. We have an extensive catarrhal hypertrophy of the mucosa of the whole cervical canal, the cylindrical epithelium often being replaced by pavement, and there is extensive formation of retention cysts. Now this condition affects the central portion of the canal wall principally, and the mere paring of the torn edges and bringing them together with sutures will in no way cure the catarrhal disease of the central strip left on each cervical segment. And I have found that the tension is so great on the sutures that the lower ones invariably tear out and allow a certain degree of ectropion again to take place.

There are other interesting points in the pathology of cervical lacerations recently brought forward by Bandl. He found that in 130 post-mortems on women who had borne children, 76 showed well-marked inflammatory residues in the parametral surroundings of the cervix, and that these cases also bore evidence of cervical lacerations. It can also easily be understood that the constant endeavor on the part of nature to heal the injured part during the puerperium would tend to keep up a venous congestion, leading to increased growth of connective tissue ; and in this way we get inflammatory remnants in the parametral tissue surrounding the cervix following laceration. These inflammatory remnants are also found affecting the peritoneum, causing displacements of the uterus of a most intractable kind to treat. In the case of a heavy bulky uterus descending low down in the pelvis, and, when uncomplicated by inflam-

matory remnants, becomes retroverted by virtue of the long hyphertrophied cervix being driven against the posterior wall of the vagina, and is reflected forward and downward, causing the fundus and body to be thrown backwards. In such cases I have found the truth of this mechanism of retro-displacements in the fact that after the removal of the cervix, the uterus did not become retroverted, and therefore did not require a pessary. I do not mean, however, that those aggravated cases of prolapse with a retroflexed uterus jammed low down in the well of the pelvis should be confounded with the cases in point—they require other additional methods of treatment. On considering all these facts, and the unsatisfactory results following Emmet's operation in certain such cases, it occurred to me that some procedure more radical in character must be done so that we may reduce the size of the uterus and cut off some of its abnormal blood-supply. Towards this end, exsection of the whole of the diseased mucosa and sub-mucous tissue suggested itself to me in the form of what is known as Schrœder's operation. This operation consists in splitting up the cervix on each side to, or past, the vaginal junction, as circumstances may indicate. Then a transverse incision is made across the base of the flap, just below the internal os; this incision should go through the mucous membrane well into the fibrous wall of the cervix. With a long, sharp-pointed, straight bistoury the centre of the segment is transfixed from its point to the transverse incision at its base. The wedge-shaped piece thus lined out is removed and the flap remaining turned in over the stump by silkworm gut sutures. The same is done with the other segment of the cervix, and one suture is passed through the angles on each side. The wound is now dressed with absorbent cotton saturated with 1 to 40 carbolic acid in glycerine, and dusted with hydronaphthol. This dressing is allowed to remain *in situ* for six to eight days, when it will be found quite aseptic. The sutures are removed on the tenth day.

I may here, in passing, say that I always curette the walls of the uterus with the sharp instrument and use the steel dilators on the internal os, if necessary, to secure good drainage. I rarely use vaginal injections, as, if at the outset we make the

vagina aseptic, and carry on the operation under sterilized hot water, we need have no fear of after decomposition of the fluids. I have now performed Schrœder's operation upon the cervix in 15 hospital and 22 private cases, and have not known a single rise of temperature or other untoward symptom follow the operation. The after results have been so gratifying, over and above what I had before received from Emmet's method, that I will continue to discriminate and perform it in all suitable cases.

CERTAIN EYE SYMPTOMS OF INTRACRANIAL ORIGIN.

By J. W. Stirling, M.B. (Edin.), Montreal.

(*Read before the Canadian Medical Association, at Ottawa, September*, 1888.)

The subject of my paper, "Certain Eye Symptoms of Intracranial Origin," has to do with that well-known and perhaps rather threadbare subject, "The Abnormal Limitations of the Field of Vision,"—*i.e.*, scotomata, hemianopsia, etc.,—and also the limitations of the field of color perception. These limitations, in the light of some recent investigations by Willbrand and others, are, indeed, of clinical importance to the general practitioner as well as specialist in enabling him to localize certain cerebral lesions.

I will endeavor, within the limits of a short paper, to give a *resumé* of these investigations, illustrating them by a few cases which have come under my notice. I trust it may not be out of place if I at first run over the course and ultimate destination of the optic nerve fibres. Proceeding backwards from the eye, the optic nerves decussate partially at the chiasma, after which, taking the name of optic tracts, they continue backwards, bending round the pedunculus cerebri. Fibres from the right tract supply the right side of both retinæ, and those from the left tract the left side. The macula lutea of each eye is connected, it is at present assumed, with both cerebral hemispheres. But, to return to the optic tracts themselves, they arise:

(1) By fibres from the grey substance of the optic thalmus and the anterior corpora quadrigemina, the corpora geniculata forming ganglia intercalated in the course of certain of the fibres.

(2) Fibres come from the tegmentum of the crus.

(3) Also of marked import are certain fibres which pass directly through the medulla oblongata without the intervention of grey matter, forming the so-called spinal root of the optic tract, and explaining the pupillary reaction on the stimulation of the retina by light.

(4) A broad band of fibres passes from the tract to the psycho-optic centre at the apex of the occipital lobe, called the optic radiation of Gratiolet.

Other connections of the optic tracts with the cerebral hemispheres exist, far too numerous to mention in detail here; indeed Gratiolet affirms that the optic tracts are connected directly with every part of the cerebral hemispheres from the frontal to the occipital lobes. Some fibres are ganglionic, arising from the basal ganglia, and others cortical in origin—both uniting to form the optic tracts.

Lastly, I may mention as of importance that certain fibres cross in the corpus callosum from the motor areas of the opposite cerebral hemisphere, enter the outer capsule, and join the tract directly.

Commencing in front at the optic nerve, I will now, passing backwards, give examples of lesions in various parts of the visual tract. Lesions of the optic nerve associated with monocular blindness and dilatation of the pupil are common, but I may be permitted to cite as an example of a certain class of these cases by no means very common one which I lately had under treatment:—

J. P., aged 45, seen March 12th, complaining of loss of sight in his left eye. About New Year he slipped on the ice and fell, striking his forehead just over the supra-orbital ridge. Was at that time treated for fracture of the skull. Three weeks later the vision of the left eye began to get impaired, and has since steadily got worse until now it is abolished. Examination revealed a deep depression over the left orbit, at the junction of the inner and middle thirds, extending from the edge of the orbit one inch upwards; deep palpation can also discover a depression in the roof of the orbit, extending backwards in the direction of

the optic foramen. Ophthalmoscopic examination showed haziness of the margins of the disc, two or three vessels hidden, and atrophic pallor beginning.

These cases of fracture of the orbital roof extend into the optic foramen, set up a retrobulbar neuritis, followed by atrophy of the optic nerve, or at other times act by pressure caused by exudation or hemorrhage.

Coming now to the chiasma as the seat of lesions causing a limitation of the field of vision, I saw a case, during my house-surgeon days at the Royal Infirmary in Edinburgh, of the rare condition of paralysis of the inner halves of both retinæ—*i.e.*, blindness of the temporal sides of the field.

W., aged 23, was seen by Dr. Berry. Although the patient was almost moribund, still the defect of both fields of vision to the temporal side was clearly observable. The patient died a few days later, when the post-mortem revealed a tumor the size of a small hen's egg occupying the region of the pituitary body and involving nearly the whole chiasma.

I have at present another case of evident lesion at the chiasma.

W. J., aged 42, came to me in February complaining of complete loss of vision in the left eye entirely, and partial loss in the right eye. Sight began to fail in the left eye two years ago, and for the past six months has been completely abolished. The right eye began to fail eighteen months ago, but for the past eight months there has been no change. No history of syphilis, but a marked alcoholic one. Left eye, no perception of light. Right eye, complete blindness to outer side of field—*i.e.*, paralysis of nasal side of retina. Inner portion of field amblyopic. Counts fingers at twelve feet. Pupil, right eye active; left eye motionless, except on stimulation of right eye.

Here the lesion undoubtedly affects the anterior part of the chiasma, since the nasal portions of both retinæ are paralyzed, and likely, also, the adjacent portion of the left optic tract is affected. Ophthalmoscope showed both discs pale and atrophic.

Cases of homonymous hemianopsia or blindness of the same areas of both retinæ are invariably caused by lesions posterior to the chiasma. Those occurring in front of the anterior cor-

pora quadrigemina—*i.e.*, in the optic tract—being distinguished from those occurring behind them in the occipital lobes by the loss of the pupillary reflex.

The reaction of the pupil on stimulation of the retina by light being abolished in the former case, but retained in the latter, together with absence of dilatation, although there is no psychical perception of light.

This is easily understood by considering the anatomical conditions, for it is in the region of the anterior corpora quadrigemina that the tract gives off its spinal root, through which the reflex travels to the third nerve, which innervates the sphincter pupillæ. The centres are in the medulla, and are coupled, so that both pupils react, although only one retina be stimulated.

The experiments of Curschmann, Haab and others have conclusively proved the existence of a unilateral innervation centre for corresponding portions of both retinæ.

The lesions in post-mortem sections have been found to occupy portions of the cerebral occipital lobes, viz., the first, second and third, and the cuneus.

Munk excised the occipital lobes of a dog, causing paralysis of the same sides of both retinæ—*i.e.*, blindness to the opposite side in the field of vision. On excising the occipital lobes of both hemispheres, although the animal was totally blind, yet the pupils reacted readily to light.

Schaefer has found that on excising all of the occipital lobes except a layer of the lower surface in the monkey, the eye was entirely blind except the upper part of the field of vision—*i.e.*, the lower portion of the retina alone remained active.

Important aid in localizing the lesion causing the eye symptoms may be obtained by the collateral phenomena—*e.g.*, seat of pain, depressions in skull, abnormal phenomena in areas supplied by other nerves.

Willbrand has very ably drawn a number of inferences from the aggregate of symptoms he has observed in occipital lesions. They are :—

1st, That in homonymous areas of the field of vision in hemianopsia, the light sense cannot be reduced without the perception of form and color being similarly reduced.

2nd, That perception of form and color can be reduced without the light perception suffering.

3rd, That perception of form cannot be affected without color sense also failing.

4th, That color perception only may be affected; the light and form perception escaping.

Upon these data he formulates the following:

1st, The fibres of Gratiolet run to the very periphery of the cortex cerebri of the occipital lobes and cuneus, which form the psycho-optic centre.

2nd, The cortex is divisable into three layers, superimposed, in the outermost of which resides the color sense, in the middle the perception of form, in the innermost the light sense.

Now as the fibres of Gratiolet run to the extreme periphery, the course of any one fibre must be through all these three layers. Now it is evident that a lesion of a fibre occurring in the innermost layer will prevent its functionizing in the middle and outer layers; again, that a lesion in the middle area will prevent its acting in the outermost layer, although the innermost escapes, and, finally, that a lesion may occur in the outermost layer without at all altering the function in the two inner layers.

A very interesting and rare case occurred in my practise last spring:

K., aged 30; incipient symptoms of general paralysis of the insane; vision $\frac{5}{6}$; pupils active; fundus normal. Field free for general vision, but *total color blindness* existed to the left side of both fields of vision—*i.e.*, the right occipital lobes were affected. There was also slight facial paralysis of the left side only noticeable on smiling. Patient complained of occipital headaches.

Another case:

T. S., aged 30; poor vision in both eyes. Nine months ago, while skating, he fell and struck the back of his head. A few days later severe meningitis supervened Patient was unconscious for several weeks; on regaining consciousness was totally blind. Sight has since been gradually returning. Patient has

still occasional severe occipital headaches. Examination of fundus reveals pallor of both discs with diminished calibre of vessels. Vision: L.E., $\frac{6}{6}$, pupils active; Jaeger 16.

R.E., fingers ten feet.

Both fields of vision limited all round, the R.E. extremely, and wanting entirely to the left and downwards. The L.E. field not limited to so great an extent as that of the R.E., but is also more limited downwards and to the left. The limitation of the fields, the reaction of the pupils, and the seat of pain point to the occipital lobes as the seat of the lesion.

I have not heard for some time from this patient, but it is likely the vision and field will continue to improve as long as the meningitic exudation keeps on absorbing.

In conclusion, I think these few notes may be of use to the general practitioner in assisting him to localise the site of some cerebral lesions, by studying the fields of vision, which can be done approximately without any special instrument, and also by noting the condition of the pupils. To recapitulate:

1st, Are the same areas of both fields affected? Then, if so, the lesion must be behind the chiasma, in the tract or occiput; if same areas are not affected, then the lesion may be in the chiasma, in the nerve, or in the eye itself.

2nd, Is the pupil dilated and inactive? Then the lesion is anterior to the anterior corpora quadrigemina in the tract if the defect of the field of vision is homonymous. If the pupil is active, at the same time with a homonymous defect of the field of vision, then the lesion is behind the corpora quadrigemina.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

GYNÆCOLOGICAL CASES UNDER CARE OF DR. ALLOWAY.

(*Continued from page* 284.)

CASE III.—*Chronic Cystitis treated by injections of strong solution of Nitrate of Silver.* (Reported by MR. GARROW.)

L. S., aged 33, unmarried, admitted to hospital complaining of painful and frequent micturition; has been troubled for four years, but during the last two years has been much worse. Would urinate every half hour during the night. Family history good. No diathesis. Has always been regular, excepting some seven months in 1881, during which her menses entirely ceased. Had measles eight years ago, since which she says she has never been perfectly well.

Examination.—Urine contains a large quantity of pus and some blood. Uterus and annexa normal. Paracystal tissue extremely sensitive to touch.

May 7th.—Patient unwell; flow scanty. *11th*—Feeling well. *18th*—Began washing out bladder with a solution of salicylic acid (1 to 1000) twice daily, and each alternate day with a solution of nitrate of silver, two grains to the ounce. Bladder curetted through urethra under ether.

June 17th.—Washed bladder with 20-grain solution of nitrate of silver in the morning, and with plain water at 1 and 7 P.M. (Hegar's fuunel apparatus used.) *25th*—Washed out bladder with 30-grain solution of nitrate of silver. *26th*—Patient much better; comparatively free from pain.

July 5th.—Thirty-grain solution of nitrate of silver for the last few days with much improvement.

Since this date improvement has been steady and marked. Pus cells have entirely disappeared from urine, which has assumed normal appearance, and is retained for six hours. Left hospital on 10th August practically well, but will continue the treatment at home.

This girl learned to use the funnel herself. She was supplied

with solution of the nitrate, and promised to keep up the treatment for some time after arriving home.

CASE IV.—*Carcinoma Uteri; Death from Uræmic Coma through involvement of Ureters.* (Reported by MR. GARROW.)

M. C., aged 38, married; has three children, youngest seven years of age. Had a miscarriage in August, 1885, and dates her present trouble from this time. This patient was admitted into the hospital in November, 1885, case report reading as follows:—

Nov. 6, '85.—Sent to hospital as a case of typhoid, and complains of fever and weakness. From what can be gathered from patient, she took sick six weeks ago with a cough and some expectoration; became chilly and feverish three weeks ago, and took to bed a week later; has had no headache or giddiness; suffered from thirst and anorexia; bowels constipated; miscarriage in August, and since that has been losing flesh and strength.

Examination.—Heavy dull countenance and rather deaf; skin hot and dry; much emaciated; temperature 103° in the evening; pulse rapid, rather small volume, fair strength; tongue dry, red, glazed and cracked. On abdomen a few rose-spots; no marked tenderness but gurgling in right iliac fossa; no distension. Lungs: a few sibilant râles. Heart normal. Urine normal.

Nov. 9th.—What were taken for rose-spots have developed into tubercles, elevated, not surrounded by areola, about the size of half an orange pip. Family history: father, mother and three sisters died of phthisis.

Nov. 12th.—Papules have developed into pustules, five or six on front of abdomen; temperature has been irregular; pulse and respiration rapid. Lungs: harsh respiration in front of left and broncho-vesicular in right apex behind; vesicular quality is ill marked all over; no dullness. Skin dark color, covered with sudamina, very short. Almost no cough. No abdominal pain nor tenderness, and no vomiting.

Nov. 18th.—Abdomen flaccid. Little or no cough since ad-

mission. Respiration broncho-vesicular in character, right apex to sixth rib behind; no râles or other physical signs.

Nov. 30th.—Temperature has been normal for last few days. Tongue cleaning; great emaciation; pulse 84. Sputa examined for bacilli tuberculosis and none found. (Examination by Dr. Johnston.) Lungs: no adventitious signs.

Dec. 6th.—Convalescing satisfactorily; temperature normal; gaining strength.

Jan. 16, '86.—Patient discharged to-day; normal temperature; much stronger though still considerably emaciated.

Patient readmitted to hospital on 14th February 1888, this time complaining of pelvic trouble. Menstruation irregular and frequently excessive; severe dysmenorrhœal pain; profuse leucorrhœa and pain in back and loins; also has frequent floodings. Vaginal examination shows cervix in an advanced stage of cancerous infiltration, involving rectum and bladder; uterus fixed by pelvic adhesions; also find a vesico-vaginal fistula.

Patient put under palliative treatment; has recurring floodings, also intermittent attacks of diarrhœa; very little pain throughout and no vomiting. Keeps fairly comfortable; is greatly emaciated; has no need of opiates; kept gradually getting weaker, and died of uræmic coma at 10.45 A.M, August 26th, '88. During last week, œdema of feet and ankles noticed. Appetite fairly good throughout.

Post-mortem examination showed the following: Whole cervix a mass of cancerous tissue, with infiltration of posterior wall of bladder and anterior wall of rectum. Patency of vesico-vaginal fistula destroyed in removing the cancerous mass. There was also infiltration of left pelvic floor at brim. Both ureters were enlarged, especially the left, which was about three-eighths of an inch in diameter. Vesical end of ureter was occluded by the cancerous mass. On severing, a considerable quantity of thin pus was allowed to drain away. On slitting up ureter to left kidney and opening kidney, found it completely undermined and showing well the pathological appearance of surgical kidney. Right ureter was also dilated somewhat, but not to same extent, nor was it occluded. On section, right kidney showed several

small caseous-looking spots in its substance, but no disintegration; also found a small calculus in pelvis of kidney (right). Several small abscesses appear in pelvic cavity. Lungs: right showed nothing of any interest; left, considerable tubercular infiltration. Also found a small-sized cavity, the softened material from walls of which, on examination microscopically, showed presence of tubercle bacilli. (Examined by Dr. Springle.) Liver and spleen show nothing beyond hyperæmic condition. No cancerous nor tubercular deposits found in either organs. Other organs show nothing special, excepting heart, which was very anæmic. Wall of right heart very thin, and cavities somewhat enlarged; left heart, structure much hypertrophied. Thickening of right auriculo-ventricular valves and atheroma of aorta.

Reviews and Notices of Books.

A Text-Book of Human Physiology. By AUSTIN FLINT, M.D., LL.D., Professor of Physiology, etc., in the Bellevue Hospital Medical College. With 316 figures and two plates. Fourth edition, rewritten. New York: D. Appleton & Co. 1888.

This edition is certainly the most suitable for the medical student of any the author has yet produced. The matter is well arranged, the statements clear, and the illustrations well chosen. The author states in his preface his own views as to a text-book for students: "It does not seem to me that the value of a text-book is materially enhanced by elaborate descriptions of apparatus and methods, except as they involve principles susceptible of general physiological application; nor does it seem profitable to follow out the details of intricate mathematical calculations involved in certain studies, such as physiological optics and acoustics, the results of which are universally accepted. It is sufficient to teach by text-books the science of physiology. The art of investigation and the methods employed in physiological research are to be learned in the laboratory and from special treatises and monographs."

With this in the main we have long been in accord; we would,

however, qualify the last sentence by the introduction of some such word as *chiefly* before "learned" in the last sentence of this extract.

The views of Professor Flint as a teacher of long experience are entitled to respect, and he has, in writing his work, certainly adhered to his expressed convictions. For our own part, we think a little more of methods and apparatus would not have been out of place; but with the profuse treatment given to such subjects in some books we do not at all agree. This work is not only comprehensive, but in it the conclusions of the science are arranged in a form readily grasped and remembered.

The work has been executed in the Appletons' best style, and the student's eye must be charmed while his mind is instructed. While the work does not depart as largely from old paths as some could wish, it certainly does avoid the extremes of some modern text-books of physiology. If it does not show great penetration or originality, it does evince discernment and common sense, and, on the whole, may be regarded as a fair compromise between the old form of text-book and the one that has gone to the new extremes. Dr. Flint has run few risks, pursued the safe middle way, and has produced a fairly good work.

A Compend of the Diseases of the Eye, including Refraction and Surgical Operations. By L. Webster Fox, M.D., Ophthalmic Surgeon to the Germantown Hospital, &c.; and George M. Gould, M.D. Second edition, revised and enlarged; with seventy-one illustrations. Philadelphia: P. Blakiston, Son & Co. Montreal: E. M. Renouf.

This work, which forms one of the series of handy compends published by Blakiston, Son & Co., has now entered on the second edition. This certainly shows that it fills a popular want. It is very condensed and handy for the student of medicine, who cannot spare the time from the other multifarious subjects of his curriculum to read any of the treatises on the diseases of the eye. The condensation, however, is occasionally carried almost too far, as take, for instance, the subject of corneal ulcers,

which is dismissed in one paragraph. Otherwise it is good, as giving in succinct form the opinions and treatment of various high authorities on the subject. The book is well printed and freely illustrated.

Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

Surgical Section.

(*Specially reported for* Montreal Medical Journal.)

Dr. Shepherd of Montreal read an address, entitled *Some Recent Advances in Surgery.* (This address appears in the present number of the Journal.)

In the discussion which followed the reading of Dr. Shepherd's address,

Dr. F. W. Campbell of Montreal related a case of tumor of the spinal cord which had come under his notice last winter. The patient had had severe pain on one side of dorsal region for some time; he then became paraplegic. Dr. Seguin of New York was called in and diagnosed tumor pressing on the cord, and ordered large doses of iodide of potassium to be taken daily; if this did not do good in ten days, he then advised operation. The patient was given 250 grains of the iodide daily, diluted in large quantities of potass water. One day he by mistake took the whole 250 grains in one dose without any bad results. Under this treatment the patient rapidly recovered his health, and at the present time is attending to his business and is as well as ever he was.

Dr. Graham of Toronto objected to the statement made in Dr. Shepherd's address, namely, that surgery was now leading medicine. He strongly advocated conservatism, and advised practitioners not to attempt the different operations alluded to because they had been successfully performed by men of ability and experience. All men were not fitted to perform these operations, such as that of radical cure of hernia and others described in the address.

Dr. Roddick of Montreal agreed with the reader of the

address in his remarks on antiseptics. The best antiseptics were soap, water and a nail-brush. He stated that he was the first to introduce Listerism into Canada and had good results from it, but experience had taught us that the elaborate ritual might be very much simplified, and that now the method had become so simple that any man in the country could satisfactorily carry out antisepticism. In speaking of lateral lithotomy, he said that he had performed this operation thirty-four times with one death, and hence he did not care to give up an operation which had given him such good results. He had lately performed the supra-pubic operation in a man who had a large stone, and in whom he had operated ten years before for stone by the lateral incision. In these cases he did not favor suturing the bladder, but believed in free drainage through the wound and through the penis. He had had one case of brain surgery during last winter. A man who had received a wound in the head some years before developed epileptic fits. Over the left ascending frontal convolution was a depression. He trephined here and removed a large portion of bone and dura mater. The patient had a fit some hours after the operation, which started free bleeding, and patient died comatose in forty-eight hours.

Dr. Mullin of Hamilton mentioned several cases of intestinal obstruction which had come under his notice and had been operated upon. In some of the cases the obstruction was not found at the place expected, and in others the adhesions were so great that nothing could be done. One case came on slowly, and it was three days before indications for operation appeared. All the cases resulted in death. He asked, "How are we to know the time to operate?" In these cases the general practitioner should not hesitate to transfer them to the surgeon.

Dr. Hill of Ottawa stated that he had strong objections to carbolic acid, and that when he was a student in the London Hospital sixty-five years ago as good results were obtained in surgery as at present; it was usual for amputations to heal by first intention. He mentioned a case of a man who was struck on the head with the sharp end of a pike pole and afterwards was subject to epileptic fits. There was a depression in the skull

where the pike pole had struck. The skull was trephined at this spot and the patient had no more epileptic fits for eighteen years. These fits, however, have since returned.

DR. PROUDFOOT of Montreal then read a paper on *Excessive Hemorrhage after Cataract Operations.* Patient was a large robust man, who was rather intemperate. The cataract was removed without iridectomy. Great hemorrhage followed, which was stopped by pressure; it recurred, and finally the eye had to be removed. The eye was examined and the hemorrhage was found to proceed from the central artery of the retina; a dilatation was found at its exit. Hope of Chicago and Foyer of Kansas City have reported similar cases.

DR. FENWICK of Montreal next read a paper on the *Removal of Retro-pharyngeal Tumors.* Dr. Fenwick gave a short account of the various operations performed for the removal of malignant and sarcomatous tumors in the region of the pharynx. Dr. Cheever of Boston was the first to advocate removal by external incision. Velpeau previously had removed them through the mouth, having first cast a ligature round the carotid artery. Butlin advocates the removal of sarcomatous tumors of the pharynx through the mouth, and says they usually shell out easily. In malignant disease, Czerny makes an incision from the angle of the mouth and thence to angle of jaw and down the neck to the hyoid bone, dividing the jaw in front of the masseter muscle. Langenbeck was the first to practise section of the lower jaw in these cases. Obolinski divides the jaw behind the masseter. Dr. Fenwick had on two occasions removed tumors from the retropharyngeal region, and by an incision commencing above and behind the ramus of the jaw and continuing round the angle of the jaw and for a greater or less distance along the body. The parts were carefully dissected, the vessels pulled outwards, and the tumor reached with the finger; if sarcomatous it could be easily shelled out. In one case, to give himself more room, he cut off the rather prominent angle of the jaw. His first case was operated upon in 1880. The patient was a young girl aged 18, who had a number of painful tumors in various parts of the body. One of these tumors was situated in the

pharynx, behind the right tonsil, and caused her so much pain in swallowing that she was willing to undergo any operation for its removal. An incision was made commencing one and a half inches above the angle of the jaw and following a course a little behind and below the jaw; the dissection was carried down in front of the vessels and below the digastric muscle, the finger was then used, the tumor reached, and easily shelled out. The patient made a rapid and permanent recovery. The tumor was found to be a fibro-neuroma. The second case occurred in 1886, in a woman aged 48. The tumor was situated on the right side, and posterior to the tonsil; it was as large as a hen's egg. An incision was made from the lobe of the ear downwards, a little posterior to the ramus of the jaw, and was continued round the angle of the jaw to the front of the neck. To obtain more room a portion of the angle of the jaw was removed. A careful dissection was made as in the previous case, the tumor reached, and easily shelled out. There was very little bleeding. The tumor proved to be a sarcoma. The patient rapidly recovered from the operation, but the facial nerve had been cut and she suffered from facial paralysis of that side. There has been no return of the tumor, and the facial paralysis is now hardly perceptible.

Dr. Shepherd said that in cases of retropharyngeal growths a distinction should be made between those that were cancerous and those that were sarcomatous. In the former, such an operation as that described by Dr Fenwick would be of but little use, a more extensive incision such as that recommended by Czerny, Kocher and others being needed, not only to remove the cancerous growths, but to extirpate the involved glands. Sarcomatous tumors of the retropharyngeal region usually shell out easily, and could be removed through the mouth if not too large. Dr. Shepherd related a case where he had removed a retropharyngeal tumor by a somewhat similar incision to that used by the reader of the paper. The tumor occurred in a woman aged 40, and was the size of a small orange. It was first noticed eight years previously, and had been treated as an enlarged tonsil; latterly it had rapidly increased in size, and

interfered with articulation and deglutition. An incision was made from the angle of the jaw downwards and forwards, internal to the carotid vessels and below the digastric muscle; the tumor was easily reached and separated, but owing to its size could not be removed through the wound without breaking it up; it was removed with a large spoon. A very severe venous hemorrhage took place at the time, which suddenly stopped on using pressure. For a week the patient went on well, but on the seventh day a tremendous hemorrhage took place from the wound. When Dr. Shepherd reached the patient she was almost pulseless, and the bleeding had stopped. The wound was plugged with carbolized sponges. A second severe hemorrhage occurred on the fourteenth day after operation. This had also ceased before Dr. Shepherd reached the patient. The hemorrhage appeared to be venous. After giving considerable anxiety, the patient finally made a complete recovery and has had no return of the tumor. The tumor proved on examination to be a round-celled sarcoma.

Dr. Proudfoot stated that when he was house-surgeon in the hospital at Boston he had assisted Dr. Cheever in the operations referred to by Dr. Fenwick. There was great trouble in removing the tumors, and some of the cases were followed by severe hemorrhages, as in the case described by Dr. Shepherd.

Dr. James Bell of Montreal read a paper on a case of *Exostosis Bursata*. This rare affection occurred on the inner side of the lower end of the thigh of a boy aged 20. The bony growth was about the size of an orange, and appeared to spring from the condyle below the epiphysial line. It had a bony pedicle three-quarters of an inch long and half an inch in diameter. Its surface was covered with cartilage in small isolated nodules. The whole was enclosed in a perfectly-formed synovial membrane, which was continuous with the periosteum of the pedicle. This sac contained half an ounce of clear, amber-colored synovial fluid, in which loosely floated fifty-four cartilaginous bodies, looking exactly like floating cartilages found in the knee-joint. These varied in size from a bean to a small pea. The tumor was first noticed nine years before as a small, soft, mov-

able growth about as large as a marble. It grew steadily, and only four years before had become fixed and felt hard. There never was any pain in connection with it, but the patient complained of its inconvenience and the fatigue of the muscles in walking up stairs. Fehleisen had reported a similar case which occurred in Bergmann's clinic, and refers to another seen in Billroth's clinic in 1863. In Bergmann's case 500 loose cartilages were found, and in Billroth's only 35. Rhindfleisch had investigated Bergmann's case and had come to the conclusion that it had originated, not as an ordinary exostosis from epiphyseal cartilage, but as an enchondrosis of the cartilage of the joint which had pushed out a portion of the synovial membrane; this in time had been cut off from the joint cavity and had formed a separate sac over the tumor. Fehleisen, however, attributes these growths to a developmental error, by which a group of cells separate from the joint and lying dormant suddenly springs into action and produces this form of exostosis. The free cartilaginous bodies form a special character of this form of exostosis. He ascribes the origin of the free floating bodies to tufts of synovial membrane in which are formed minute islands of hyaline cartilage. These develop and are set free in the cavity of the synovial sac.

Dr. Shepherd said the case was a most interesting and rare one. It threw a great light on the formation of floating cartilages in joints. He was convinced that the little buds of cartilaginous substance growing from the inside of the synovial membranes accounted for these free cartilaginous bodies. This form of exostosis is different from the ordinary and more common form which is seen growing from the epiphysial cartilage. These stop growing with the maturity of the individual.

Dr. Shepherd of Montreal read a paper on *Mania following Operations*. He said that not a few cases of mania after operations are reported in medical literature. In these cases it was difficult to say whether the mania was caused by the traumatism or the anæsthetic. Again, iodoform may be suspected in some cases. Any shock or disturbance of function may produce insanity in those predisposed. Savage states that people of insane

stock more readily contract infectious diseases, and are likely to have early and severe delirium. The reader of the paper went on to say that not a few cases of insanity are reported after ovariotomy and other operations on the female genital tract. Werth reports six cases in 300 operations. Dr. Savage's paper on Insanity following the use of Anæsthetics was also referred to. Dr. Shepherd reported six cases af mania following operations—viz., one following operation for perityphlitic abscess, one after sequestrotomy of femur, one after amputation of the breast, one after operation for strangulated inguinal hernia, one following incisions and several administrations of chloroform for cellulitis of the arm, and one after opening an abscess in loin following typhoid fever. In two of the cases there was a distinct history of insanity; in one epilepsy; in the others no history could be obtained, but two were either much addicted to alcohol or had been considered queer. Iodoform was used in all the cases except one, but as the mania almost immediately followed the operation, this as a cause was excluded. Two of the cases proved fatal; one of the patients remained permanently insane; the others recovered completely. In conclusion, Dr. Shepherd said that it would be well for surgeons to consider whether, in persons who have a strong predisposition to insanity or who have suffered from previous attacks, it is advisable to operate when the case possesses no great urgency, and an operation is not essential to the patient's life.

Dr. Bell of Montreal, in the discussion which followed, related two cases of mania which he attributed to the prolonged and abundant use of iodoform after operation. Both his cases ended fatally. One was a case of most extensive burrowing of pus in the abdominal walls, and the other a case of ovariotomy, where wounding of the bladder was followed by infiltration of urine.

Dr. R. W. Powell of Ottawa said he was sceptical about iodoform producing acute mania. He was not aware that any cases of iodoform insanity are reported where there had been no operation. He thought, in the cases reported by Dr. Shepherd, the mania was due to traumatism in persons who had either been addicted to alcohol or had an hereditary tendency to insanity.

Dr. Buller of Montreal said that mania was not uncommon after eye operations, especially after cataract operations. He thought it was due to the confinement in bed and binding up of the eyes, and perhaps also to the use of belladonna. When belladonna is used without operation, cases of mania may occur. He saw mania follow in a case where belladonna was used for iritis, and another case where an old woman became insane after the removal of a cataract, she ultimately recovered.

Dr. Dickson of Pembroke asked if mania from iodoform would be apt to occur if large quantities of the drug were applied to small cavities or surfaces.

Dr. Buller of Montreal read a paper on *Penetrating Wounds of the Eyeball.* (This paper appeared in the October number of this Journal.)

Dr. Proudfoot of Montreal reported a case of severe wound of the eye which he had successfully treated. He dwelt on the importance of early treatment in these cases.

In reply to Dr. Dickson of Pembroke as to the proper treatment of inflammation of the eye following injury, Dr. Buller said that he preferred cold compresses; he used warm applications as soon as pus appeared in the corneal wound. The solution used by him was 1 to 10,000 of bichloride of mercury. Internally he gave 10 to 15-grain doses of antipyrin.

Dr. Stirling of Montreal next read a paper on *Some Eye Symptoms due to Cerebral Lesions.* (This paper appears in the present number of the Journal.)

In the discussion which followed the reading of the paper, Dr. Buller stated that in cases of fracture of the orbital plate, the blindness may be due to infiltration of blood in the sheath of the optic nerve. He related a case of blindness from this cause which he had seen in his own practice.

Dr. Lapthorn Smith of Montreal next read a paper on the *Treatment of Varicocele and Orchitis by the Electrical current of Tension*, and also reported a case of *Resilient Stricture of the Urethra cured by Electricity.*

A discussion followed the reading of these papers, in which Drs. Dickson, Buller, Church and others took part. There being no more business before the section it adjourned.

ASSOCIATION OF AMERICAN PHYSICIANS.

Third Annual Meeting, held at Washington, Sept. 18, 19 *and* 20.

Dr. E. C. Seguin of New York opened the discussion on *The Relation between Trophic Lesions and Diseases of the Nervous System.* He said that he excluded from consideration vasomotor disorders, and diffused or quantitative nutritional changes, partly because he considers them to be a distinct subject, and partly because their study would be beyond the scope of a short paper. He divided the so-called "trophic lesions" into two great classes. In one the lesions are probably mostly due to the action of extraneous causes, and are preventable. The second class embraces lesions which seem to be directly due to the nervous disease, and which are its necessary and unpreventable results. He endeavored to show that lesions of the second class, which alone merit the name of *trophic lesions*, occur in organs and tissues which are anatomically continuous, and whose life (or preservation of structure and function) is associated or interdependent. He concluded that disease of the nervous system produces true trophic lesions when it interferes with the associated or interdependent life of continuous tissues. This proposition he offered only as a partial and preliminary answer to the question under discussion.

Dr. H. C. Wood of Philadelphia, as co-referee, presented the following conclusions: 1. It is physiologically proven that the nervous system directly affects general nutrition. 2. Various lesions are the immediate result of previous nervous disease. 3. In various cases the lesions are not preceded by circulatory disturbances. 4. No known vasomotor condition is capable of causing any of these lesions. 5. Therefore, it is absurd to attribute changes to preceding vasomotor changes.

Dr. W. M. Ord of London said that he felt very much honored at being asked to speak on this important subject, but before he said a word he would beg to tender the Association his gratification at the very high tone and character of the discussions on the papers he had previously heard in this room. As regards the two papers he had heard read, they had cer-

tainly stood in strong contrast with one another: the one critical, the other appealed strongly to the imagination and fascinated one with its strong and logical character of thought and imagery. We would try to prove at the start how, from disturbances of nutrition, there is a starting-point in the nervous system of the local hepatic disturbances. He did not think Dr. Seguin denied that the changes in chronic rheumatism are of a histological cearacter. He would quote two cases bearing upon this point which he saw recently before leaving London, having had them under observation for more than a year. The first was a case of chronic hypertrophic cervical pachymeningitis, which presented a very typical form of that disease. This patient, a young man, at the time of his admission showed very little change in the skin and none in the joints. He was kept in bed, treated, and recovered to a large extent his motor power, and completely his sensation. There was a steady wasting of the tissue around the second and third digits, a distinct and marked change in the joints. The joints of the thumbs and fingers became somewhat tender, and finally loose. All the physical signs of progressive chronic arthritis developed in conjunction with dystrophy of skin and muscle without any local irritating cause. The next case was an old man, who, for many years, lost power and wasted in the upper extremities. This man had a wasting of the skin, and a very remarkable change in the joints. They were considerably swollen, were constantly dislocated and as constantly put back in place. The whole muscles of the upper extremities were wasted. He sat up in bed with great difficulty. These two cases illustrate very well the primary affection of the nervous system in determining dystrophy of the joints. Early in his endeavors to analyze pseudo-arthritis he was brought face to face with a class of cases which interested him very much. As a woman approaches the climacteric period one sees a painful swelling of the small joints of the fingers and toes. Examining this with great care the one thing always present was disorder of the catamenial function, and chiefly such a disorder as consisted of menorrhagia. He had seen cases in which, as the climacteric began to develop,

the joint affections returned with intensified severity; but the day before he left London he saw two cases; one was a lady of sixty years, who had troubles of this kind during the climacteric period, and had a large uterine fibroid. Here was an unusually persistent type of the subacute form of this disease long after the cessation of the catamenia. People who suffer in this way are, in all cases, very excitable, anæmic, and sensitive women. It appeared to him that, as affections of the nerves or spinal cord may bring about neurotic dystrophies in joints, so local irritation may produce, in a reflex way, affections of joints more or less parallel to the affection determined by nerve disease. In the same way he has great reason to believe that continued prostatic irritation will produce affection in the joints of the leg. Gonorrhœal rheumatism may itself not be the result of a microbe, but the work of the nervous system. Acute rheumatism might be traceable to similar causes. It seemed to him that acute rheumatism is often developed under conditions which would indicate affections of the nervous system—such affections as would bring about, in a reflex way, the irritation of the joint. It occurs certainly after parturition. It occurs almost invariably in people who are very anæmic, or have lost large quantities of blood, and whose nervous system is brought into a state of over-expansiveness.

Dr. M. Allen Starr of New York said that he had very little to add to the discussion. It seemed to him that the departure of Dr. Seguin marks a decided advance toward a certain amount of clearness in the study of trophic disturbances. The point he made, that trophic disturbances must be distinctly separated from nutritive disturbances, has not been appreciated, and it seemed to him to be a very important one, and one that threw considerable light on the subject. There is a class of nutritive disturbances that has not been mentioned yet, which has been described by Dr. Osler as cerebral palsies, viz., that class of atrophies which follows hemiplegia in children. In adults it does not appear to be followed by any amount of atrophy on the paralyzed side. It is important to separate vasomotor from trophic disturbances. Trophic disturbances follow very closely

on vasomotor disturbances, and it is not strange that the two should be confounded.

Dr. H. P. Bowditch of Boston agreed entirely with Dr. Seguin that any attempt to explain the mechanism of trophic changes must be speculative in our present knowledge. We have to recognize in muscular tissues two distinct metabolic processes, one having its cause in the nitrogenous and the other in the non-nitrogenous metabolic. These are distinct inasmuch as it has been shown that the nitrogenous metabolism is not connected with muscular activity, while the non-nitrogenous is. When the muscular activity is kept within physiological limits urea excretion remains the same. Nitrogenous metabolism of the body is essential for muscular activity. It is essential for muscular activity that an abundant stream of nitrogen should flow into the body and out again. So the nitrogenous metabolism of the muscles goes on quite independently of its functional activity. If we limit the term trophic to the nitrogenous metabolism of the muscle and let the non-nitrogenous metabolism go to the functional activity, we would simplify matters a good deal.

Dr. Pye Smith of London said that he had listened with great pleasure to the two admirable papers read before the meeting. He confessed that both from a physiological and clinical standpoint his judgment would be entirely on the side taken by Dr. Wood with such eloquence and zeal. He did not quite agree with Dr. Wood in imputing a logical error to those who resort to the supposition of traumatism and vasomotor disturbances to explain the phenomenon in question. He would quote the case reported by Hilton of a patient with an ulcer in the hand which got worse and worse in spite of all endeavors to cure it, when it was discovered that a minute exostosis was pressing on the ulnar nerve, and when the exostosis was removed the ulcer healed rapidly. Gangrene caused by an embolus obstructing an artery is a well-known fact. He still thought there are cases of gangrene quite inexplicable on such an hypothesis. They had all seen those strange cases of skin eruption come on rapidly following lesions of the cord. His own experience is that these

trophic cutaneous lesions are bullous or herpetic in character. He thought they must admit from such strong evidence that trophic nerves have a true position not only in physiology but in medicine.

DR. FERRIER of London was of the opinion that there can be no question of the direct influence of the nervous system on the nutrition of the tissues altogether apart from vasomotor changes, and agencies operating *ab-extra*. This is shown, among other things, by the structural modifications which are observed in the glands on stimulation of their secretory nerves; and by the degeneration which ensues in muscles which are separated from the cells of the anterior cornua, or when these latter are destroyed. This degeneration he holds to be the direct result of the severance of the muscles from their trophic centres, and is not due to secondary inflammatory changes, inasmuch as it occurs under conditions which entirely obviates the initiation and propagation of irritation. But he believes with Dr. Seguin that the great majority of the trophic disturbances which so commonly occur in connection with injuries of nerves, such as panophthalmitis from lesion of the fifth, and the herpetic and other cutaneous disorders from lesion of common sensory nerves, are not due to the withdrawal of trophic influence, but are the results of secondary inflammation or injurious agents operating from without. They are observed more especially in connection with partial lesions of nerves and those most calculated to excite irritation. He should, however, expect to find (although he is not aware that the subject has been fully investigated) that section of all the sensory nerves of any given region would induce degeneration of the nerve endings and their annexes, precisely analogous in character to the degeneration which occurs in muscles when the motor nerves are divided, or the anterior cornua destroyed. But the point is, whether these and similar facts are to be regarded as proofs of the existence of a special system of trophic nerves and trophic nerve centres, distinct from those which minister to the general functions of motion (secretion) and sensation, or whether the maintenance of the nutrition of the tissues is merely a different aspect of the

general functional activity of sensory and motor nerves. He has, on the principle "entia non sub multiplicanda," been more inclined to adopt the latter view, and to regard, with Sigmund Mayer and Dr. Seguin, the muscles, nerves, and anterior cornua as forming together a functional and nutritive unity. In combination these structures exhibit what we call normal laws of reaction and nutrition; but when separated they are reduced, each to its own independent vitality, and exhibit the changes which we are accustomed to call those of degeneration, characterized by the retrogression of the more highly organized, and proliferation of the less highly organized structures. The recent important researches of Gaskell have thrown new light on the structure and functions of the nervous system, more especially the nerves which innervate the walls of the bloodvessels and the hollow viscera. There are two sets of nerves possessing diametrically opposite functions. One set, *katabolic*, excite activity and cause waste; the other set, *anabolic*, inhibit activity and promote repair. It may be that the inhibitory or anabolic influence is not, like the katabolic or motor, the direct result of nerve stimulation, but only a question of interference of nerves alike in function. But if the facts cannot be so explained, then there would appear to be (in the case of the muscles of organic life at least) a system of nerves which would be properly called trophic. Whether this differentiation of nerves obtains also among the muscles of animal life is a point which has not been, as yet, determined. He is of the opinion that more light will be thrown on this subject by the researches on thermal or heat centres now being actively pursued, and on which Dr. H. C. Wood and Dr. Ott have given us valuable instructions. The question is whether there are nerve centres which influence and regulate the production of animal heat, apart from those which are related to motion and sensation. Many facts have been adduced in favor of this proposition, but, he thinks, much will have to be done before we can regard it as proved. The muscles are the chief foci of heat production in the body. He should therefore argue that the centres of heat-production must be coextensive with those which minister to the

nutrition of the muscles. He is therefore not readily inclined to believe that there can exist, anywhere in the nervous system, any one centre capable of maintaining (as a nerve centre must) afferent and efferent relations with the whole muscular system. So far as yet appears from experimental research, increased production of heat has been found in association with irritative lesions of nerve centres and tracts; but he is not aware that it has been proved satisfactorily that increased heat-production and increased tissue-waste result from the removal of a centre whose functions could, with propriety, be termed inhibitory or anabolic. But he thinks that researches in this direction are those which are best calculated to throw light on the difficult problem at present under discussion.

MR. VICTOR HORSLEY of London begged to be allowed to communicate the results of experiments performed by Dr. Fred. Mott of London in the laboratory of the Brown Institution, since it seemed to him that Dr. Mott's observations were of the utmost importance, especially in view of the direction which the present discussion had taken. The question appeared to him to present the following points. Destruction of what we regard as trophic centres or cutting of fibres leading from the same may presumably produce disturbances of nutrition in one of three ways or combination of these, viz.: (1) True trophic disturbance. (2) Loss of function. (3) Vasomotor changes. Vasomotor changes, he thought, were anyhow put out of the question by the fact that experimental removal of the superior cervical ganglion of the sympathetic produces practically no change. Dr. Mott's method of experimentation appeared to him to possess the especial merit of excluding not only this complication, but also that due to loss of function. His method was as follows: He ligatured, on one side, certain anterior roots in the cauda equina of monkeys, under strict antiseptic precautions, and then observed the condition of the femora on the two sides. Now the normal metabolic changes in bone are, of course, known since the days of Hunter to be a combination of absorption and restoration. Dr. Mott found that the trophic changes in the bones produced were destructive—*i.e.*, exaggeration of the normal process of absorption.

The femur of the side on which the roots were ligatured was probably atrophied, and on microscopic investigation Dr. Mott discovered that the medullary surface of the interior of the bone was thickly covered with osteoclasts. Considering that the function of the bony skeleton is so essentially passive, especially in contradistinction to the example of muscle quoted by previous speakers, and considering the small influence which vasomotor changes could be imagined to bear on the nutrition of such a resistent tissue as bone, he thought that Dr. Mott's experiments definitely supplied proof for the first time of katabolic changes originated by lesion of efferent nerve fibres.

Dr. Seguin, in closing, said that he had been very much pleased to find that his conclusion and subdivision of these lesions have not met with more contradiction than they had received. He claimed that true trophic lesions are the result of some mysterious connection between the nervous system and organs in other parts of the body. With respect to the very interesting experiments of Dr. Mott, he would say that there is nothing new in the essence of the experiments. He was very pleased to hear no actual refutation of his conclusions.

Dr. Francis T. Miles of Baltimore read a paper on the *Effect of Concussion of the Spine on the Reflexes*. He called attention to some lesions of the spine of a traumatic origin which, while cutting off the influence of the will, destroyed the reflex actions. This is a subject, he said, very little brought to the attention of the profession. Dr. Hammond, in his work on the *Diseases of the Nervous System*, gives a case in which the reflexes were lost. In all the series of cases collected in the *Medical History of the War of the Rebellion* nothing is said of the loss of the reflexes from concussion.

Dr. R. T. Edes of Washington said that several cases of this kind came under his observation in the hospital, in which, a number of weeks after the shock, there was very much exaggerated tendon reflex, a fact of much value in the present discussion. In one case, a male, he found him paralyzed and in a state of complete contracture. He had fallen on his back under the wheel of his waggon. On autopsy, the parts above the medulla

oblongata were lost, but all down the cord there was that condition of sclerosis which is found associated with a state of exaggerated reflex.

DR. WM. OSLER thought that as a result of concussion there may be an abolition of the reflexes which may persist for some length of time. Then, in addition to that, there may be a complete abolition of the reflexes from a central myelitis and a destruction of the integrity of the gray matter. He had a case of that kind recently in Philadelphia. The cases to which Dr. Edes referred they had all seen.

DR. H. C. WOOD had seen a number of cases in which the traumatism ended in a subacute myelitis involving the whole cord. Then, again, he had seen cases in which the traumatism ended in chronic lateral inflammation. For instance, a woman gets hurt, may be badly frightened into hysteria, the cord gets badly shaken, a minute hemorrhage perhaps occurs through it, and she gets a myelitis. We may have various lesions following traumatism, as from a blow on the head.

DR. M. ALLEN STARR said that it seemed to him that in those cases of concussion in which the reflexes are arrested and in which there is no injury post-mortem to the part of the cord that governs the reflexes, there is the explanation on the theory of inhibitory impulses coming from a higher region and transmitted downward which arrest the reflexes. Such a condition exists in hemiplegia. No doubt in many of the cases of Dr. Mills the condition was one of irritation at a higher level and so arresting the reflex. He agreed with Dr. Edes that, if the patients lived long enough, the irritation would have ceased and they would have recovered with exaggerated reflexes.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 22nd, 1888.

DR. WM. GARDNER, 1ST VICE-PRESIDENT, IN THE CHAIR.

Case of Multiple Capillary Hemorrhages and Fatty Degeneration of the Pancreas.—DR. LAFLEUR exhibited a pancreas which was uniformly enlarged to more than twice the natural size, of a dark reddish-black color externally, firm on section, and of an almost uniform dark red, mottled here and there by greyish patches which resembled normal parenchyma of the organ. A thin section of the organ showed that the general dark color was due to numerous close-set capillarry hemorrhages separated one from another by greyish translucent material. Microscopic examination confirmed the nature of the change, the hemorrhagic portions appearing of a brownish-red color, and and presenting a peculiar fissured appearance (probably due to freezing of specimen in process of making sections) ; in addition there was universal fatty degeneration of tubules and acini. The cellular tissue around the pancreas was blood-stained, but beyond this and a great excess of fat in the omentum, mesentery, and cellular tissue generally, there was no evidence of disease in any of the other organs. There was no peritonitis.

DR. GEO. ROSS stated that the patient was a man of about fifty years, who gave a history of having suffered from some obscure dyspeptic symptoms for several years. These consisted chiefly in paroxysmal pains in the abdomen, lasting from half an hour to six hours. He saw the patient only twenty-four hours before death, and found him suffering from severe pain in the epigastrium and vomiting. He had many of the symptoms of general peritonitis. The attack had come on suddenly, only seventy-two hours before he was seen. He had a rapid, weak pulse, showed signs of collapse, and rapidly sank.

Extirpation of the Uterus by the Vaginal Method.—DR. WM. GARDNER exhibited a uterus, removed for malignant disease by the vaginal method. The case presented several features of unusual interest. The patient, unmarried, aged 43, had suffered

for seven years with pelvic pain, uterine hemorrhage, and other discharges; at times fœtid fleshy masses had occasionally been expelled from the uterus; anæmia and cachexia were marked. On examination under ether, the uterus was uniformly enlarged five to six inches in depth, the cavity much enlarged, and the lining membrane nodular and roughened. Extirpation was recommended, and after due consideration the patient consented. Unusual difficulty was expected because of the large uterus and narrow, rigid vagina and perineum. After ligature of the bases of the broad ligaments and separation of the uterus in front and behind, the uterus was reduced in size by excision of portions, and in this, the only way possible, the uterus was removed per vaginam. Dr. Gardner had contemplated the possible necessity or feasibility of electing to partially detach the uterus from above after abdominal section and completing the separation from below, finally lifting the uterus from the pelvis through the abdominal incision. This, however, proved to be unnecessary. Although the operation was a very severe one in the weak state of the patient, she was in a remarkably good condition when put to bed, but she died of peritonitis in forty-eight hours. This is the first death in Dr. Gardner's experience of six cases of vaginal extirpation of the uterus. It was, however, by a great deal the most difficult of all. The specimen showed great thickening of the walls of the uterus. Microscopical examination of the specimen by Dr. Lafleur, acting pathologist to the Montreal General Hospital, showed the disease to be malignant adenoma. The thickened walls were composed of apparently healthy, smooth muscle fibre, a hypertrophy probably the result of the long-continued irritant influence of the disease of the endometrium.

Dr. Trenholme congratulated Dr. Gardner on his great success in extirpation of the uterus; a mortality of one in six was a good record. He had himself extirpated the uterus ten times and saved only four cases; in some of the cases in which the operation had been performed by him the condition was desperate and there was but slight hope of recovery from the first. He was very doubtful of the advisability of extirpation of the uterus for malignant disease, and he had almost given up performing

this operation. In the case recorded by Dr. Gardner, where the growth was apparently non-malignant and did not infiltrate, he thought a thorough curetting of the uterus and the application of electricity by Apostoli's method would have been more suitable than excision. He preferred the abdominal operation, and removed the uterus by a V-shaped incision according to the method recommended by himself. This method of making a flap of the cervix was suitable to cases of myomata, and better than ligature by wire, etc. The two flaps formed by the V-shaped incision should be sewed together firmly with silk or shoemaker's thread, and in this manner the cavity was completely closed and the danger of hemorrhage prevented. If drainage was necessary, he passed a tube through the centre of the stump into the vagina. He thought this operation would have been suitable in Dr. Gardner's case, because the os was not involved.

Dr. Armstrong said he would have liked to have heard more about the combined operation. He had no doubt that some of the fœtid discharges had escaped into the peritoneal cavity where the uterus was split up. He thought this could have been avoided by the abdominal incision.

Dr. Gardner, in reply, stated that he believed the case to be one of malignant disease ; clinically, it certainly was. His experience with removal of the uterus by abdominal section had not been as favorable as by the vaginal method. By the latter method he believed there was a field for operation even in benign cases if they were carefully selected. Leopold had reduced the mortality to six per cent. In reply to Dr. Armstrong, he said it was quite probable that the peritonitis resulted from the escape during the operation of fœtid discharges from the uterus.

Dr. Shepherd read a paper on a *Case of Excision of the Tongue ; death from Acute Miliary Tuberculosis.* The history of the case is as follows :—

A. W., aged 64, a strong, healthy-looking Irishman, entered hospital, May 19th, 1888, to be treated for an ulcer of the tongue. The patient has never been ill, never had any cough, and has been a moderate smoker. Last September first noticed a small,

hard nodule on the left border of the tongue, about an inch over the tip, and opposite a sharp decayed tooth. This troubled him, and two months later the growth was cauterized by his medical attendant; an ulcer soon formed, which had increased up to the time of entrance into hospital, and was attended with considerable induration at the base. Last March another lump appeared nearer the tip, which also ulcerated. Family history negative. His condition on entering hospital was as follows: Small, spare, active-looking man of considerable vigor, aged 64, but looks younger. On the left side of the tongue, commencing about half an inch from the tip, is an irregular fissured ulcer divided into two parts by a nodule of induration. The ulcer has an indurated base, and the whole mass of induration about the size of an almond. The ulcer is painful, there is not much salivation and no fœtor, but the patient is unable to masticate on that side of the mouth. Very little interference with articulation. On examining the submaxillary region some small hard glands were felt, which were quite movable. Examination of his organs revealed no evidence of disease. Dr. Lafleur snipped off a portion of the ulcer and examined it microscopically, but found nothing but epithelial elements. In consultation with my colleagues, and taking into consideration the history of the case, the age of patient, the appearance of the ulcer, with surrounding induration, and involvement of the submaxillary lymphatic glands, it was thought the disease was epithelioma and demanded immediate operation. On May 23rd I performed the operation which I usually do in such cases, viz., preliminary ligature of the linguals and excision of the tongue by scissors. On examining the state of the glands through the submental incisions, more were found involved than could be made out by external manipulation, and they were removed with the submaxillary glands through the incisions made for ligature of the linguals. Drains were introduced into the mouth through the incisions. The wound was packed with Billroth's sticky iodoform gauze, but this not remaining on more than thirteen hours, the surface was painted over with a solution of iodoform, castor oil, and alcohol and resin. The patient recovered well from the opera-

tion. He was fed by the rectum for three days, and everything went on well. On the fourth day he sat up and fed himself, but in the evening his temperature rose to 101° and he had a pain in his right side. Next day a well-marked friction sound was heard. The wound was doing well, and the very slight fœtor emanating from it was dissipated by a wash of Condy's fluid. Next day (the sixth) his temperature rose to 103° ; respiration 41 ; he became very weak, and died the next day about 2 P.M. Dr. Lafleur, who performed the autopsy, has kindly given the following report: "External wounds in neck healthy and granulating; wound in mouth perfectly healthy, without fœtor, and apparently healing kindly. In thorax was found a complete adhesive pleuritis of right ride. Adhesions recent, tearing easily. Similar recent adhesions over upper two-thirds of left lung. Surface of both lungs covered with numerous miliary tubercles. On section, right lung from apex to base is crammed with grey miliary tubercles the size of a millet-seed. Left lung, on section, also contains numerous miliary tubercles scattered throughout the upper two-thirds. In both lungs the tissue between the tubercles is intensely congested. No caseating bronchial glands found. Bronchi normal in appearance. Liver and kidneys contain a few miliary tubercles. Pelvic organs normal. Epididymis of right testicle is enlarged, and on section found to be entirely caseous. Vas deferens thickened. Body of testis appears normal. Left testicle and appendages normal. A microscopic examination of the growth of the tongue shows numerous tubercles on floor of ulcer, and around them abundant small-celled infiltration. Tubercles also found among the muscle fibres. Under high power numerous giant cells are visible. The glands show merely a condition of inflammatory infiltration."

There is now no doubt in my mind that the case was one of tubercular ulcer of the tongue, with a latent condition of general tuberculosis, which was lighted up into activity by the operation. The case is a unique one as far as my experience goes, and I do not see how in such a case a similar diagnosis of cancer could be avoided. An intractable ulcer with indurated base, with enlarged lymphatic submaxillary glands, occurring in an old man

of 64, would naturally be looked upon as of a malignant character. The diagnosis between tuberculous and cancerous ulcer of the tongue is always a difficult one, and tuberculous ulcers have been frequently excised on the assumption that they were cancerous. In both diseases the same parts of the tongue are affected, the lymphatic glands involved, and both forms may have their origin in injury or irritation. The diagnosis of tuberculous ulcer is still more difficult when no other signs of tuberccle are present, and when the ulcer occurs, as in the present case, between 61 and 70 years of age, and in a male. Excision of tuberculous ulcers is now a recognized treatment, and one that offers the best chance of non-recurrence, especially when the disease is primary. The present case is interesting from the fact that the patient had a previously unsuspected general miliary tuberculosis which was lighted up into activity by traumatism or severe injury caused by the operation. Such cases occur also after typhoid fever and other fevers. In the present case, as far as the operation was concerned, everything did well, and there was no evidence post-mortem of the patient having died of any of the forms of septicæmia. At one time it was thought that the ulcer might have been a cancerous one in a tubercular subject, but a careful microscopic examination of the tongue and glands failed to show any evidence of carcinoma, but distinct evidence of tubercle was present.

Dr. Geo. Ross said the surgical points in this case which had been considered by the reader of the paper were most interesting, but the medical questions which were suggested were of far greater interest to him. He had no doubt that in certain cases the diagnosis of a tuberculous from a cancerous ulcer was impossible, but the case interested him, firstly, from the fact of an acute miliary tuberculous ulcer occurring at such an advanced age. Such cases were by no means common; still he had seen not a few cases of acute miliary tubercular meningitis in persons between 50 and 60. Secondly, the occurrence of acute miliary tubercle after operation was new to him. There was no doubt that this affection had come on rapidly, yet it was not in his experience to see acute tuberculosis running such a rapid course

(seven days). He was inclined to think it was a case of coincidence, and that the acute tuberculosis would have occurred without operation; the focus of infection was no doubt in the tongue or testicle. He did not think the tuberculosis was latent and had been lighted up by the operation into activity, as suggested by Dr. Shepherd. The tubercles were all of the same age, and were recent. The patient's temperature before operation was normal, and an examination of the chest had revealed nothing. The acute pleurisy, no doubt, was the immediate cause of death.

Dr. Bell said that he did not believe the operation had lighted up into activity an already existing miliary tuberculosis. How often do we see tubercular testicles and glands removed and yet no such conditions result. The man may have been in a condition ripe for the development of the acute tuberculosis, and the shock of the operation or more likely the prolonged etherization involved in such a radical operation as that performed by Dr. Shepherd have started the process, but, in his experience, he never saw tuberculosis run such a rapid course. Dr. Bell related a case of acute tuberculosis which had supervened three weeks after an excision of the hip for strumous disease. In this case, however, there was old tubercular disease of the lung. He thought tuberculous disease of the various parts were often overlooked, especially those of the rectum, bladder and skin.

Dr. Lafleur suggested that rapidity of the disease might be accounted for by the mode of infection, which was probably through the bloodvessels and not the lymphatics. In such cases acute tuberculosis runs a very rapid course.

Dr. Reed asked if tubercle bacillis had been searched for.

Dr. Buller then read a paper on a *Case of Pulsating Exophthalmos cured by Ligation of the Common Carotid* as follows:—

Pulsating exophthalmos occurring spontaneously or as a result of traumatism is met with so seldom that every new case of this kind may still claim a place in the records of ophthalmic surgery; at the same time, the pathology of this affection is now so well

understood, in the light of cases already recorded, that little or nothing new in this direction remains for present or future observation.

In the matter of treatment, however, there is no rule so firmly established but that much must be left to the judgment and discretion of the surgeon. Injury to the common carotid in the cavernous sinus is no doubt much more common than the records of surgery seem to show. The case I am about to describe is the fourth of the kind I have myself seen, two of which have certainly not found their way into ophthalmic literature.

The first occurred in a man 45 years of age, who was thrown from his horse, striking the head violently on the frozen ground. A few weeks later pulsating exophthalmos gradually made its appearance and steadily augmented for several months. At this time (*i.e.*, after the lapse of three months from the date of the injury) there was enormous proptosis and a large, soft, pulsating swelling over the inner end of the right eyebrow. Here, too, a harsh bruit could be heard with the stethoscope, and the patient was much troubled with a pulsating noise in the head. Ligature of the common carotid was finally performed, but I believe the patient died a few weeks later from repeated attacks of epistaxis.

The second case has been placed on record by Mr. Walter Rivington (Med.-Chirurg. Transact., vol. lviii, p. 183).

The third case was that of a young man who, in a boiler explosion, was struck over the left brow by a large fragment of iron, receiving a depressed fracture of the frontal bone. About four weeks later he came to me on account of defective vision of the left eye. I found the vision of this eye very much impaired, and a pronounced atrophy of the optic nerve. He was under observation about ten days, during which time he had two slight attacks of epistaxis. A day or two later, just as he was about leaving home to visit the hospital, he was suddenly seized with a violent epistaxis and bled to death in a few minutes. The post-mortem showed a depressed fracture of the frontal bone, a fissure extending from this across the left orbital roof, the optic foramen, and body of the sphenoid, directly beneath the cavernous sinus. Here ulceration of the bone had taken place and

a direct communication was established between the vault of the left nostril and the left internal carotid, which had either been perforated by a spicula of bone at the time of injury or had subsequently become involved in the ulcerative process affecting the bone beneath it. In this case the aperture in the artery did not communicate with the cavernous sinus, hence there was no artero-venous aneurism.

The fourth case, being the subject proper of this communication, came under my observation on the 24th of May last. My notes of the case, taken that day, are in substance as follows:

"Early last February, W. G., aged 28, a robust and healthy young man, fell from a railway bridge, a distance of 20 feet, striking the right side of head and face on a piece of square timber. Was said to have been unconscious for about twenty-four hours. Both upper and lower jaw on the right side were supposed to have been fractured, but there are no signs of these lesions now discoverable. The right side of head and face were greatly swollen for several days, the right eye remaining closed for five days after the injury. During this time he suffered a good deal of pain in the injured parts. When the swelling subsided so that he could see again with both eyes, there was diplopia, one object appearing higher than the other and less distinct. As soon as he recovered consciousness he also became aware of a low beating sound in the right ear, which has continued unabated ever since. After a few days there was no more pain, but the eye remained moderately swollen and the diplopia was constantly present. The higher false image moving perceptibly up and down with each heart-beat. During the succeeding eight or ten weeks there was no perceptible change in his condition, and he was able to follow his employment. About two weeks ago he again became troubled with pain, which was chiefly referred to the orbit and brow. With this there was a marked increase in the prominence of the eye and swelling of the eyelids. Four days ago the pain became intense, so that he was unable to sleep at night. It was, indeed, the severity of the pain that finally induced him to give up his work and seek relief."

When I first saw him the appearance of the eye was strongly

suggestive of orbital cellulitis. The lids had a tense, dusky and swollen aspect, the eyeball was strongly protruded and stationary, whilst the swollen and œdematous ocular conjunctiva, extending far in advance of the palpebral fissure, was covered with a watery and mucous secretion. The conjunctiva generally was in a state of well-marked venous hyperæmia. The refractive media were unimpaired, and when the upper lid was slightly raised, no difficulty was experienced in making a satisfactory ophthalmoscopic examination; this showed a somewhat œdematous condition of the retina, this structure being cloudy, with enlargement and tortuosity of its venous system. The optic nerve was not swollen, though its margins were rather indistinct. In other respects the fundus oculi was perfectly normal. Vision was reduced to $\frac{20}{30}$, the pupil slightly dilated and fairly active; the visual field unimpaired. Displacement of the eye amounted to about 5-10″ in an outward and 6-10″ in a forward direction. At the inner extremity of the eyebrow there was an ill-defined swelling, soft and elastic to the touch, and imparting a distinct thrill to the examining finger; just at this point, too, the stethescope disclosed a harsh rasping bruit synchronous with the action of the heart. This sound was distinctly audible for a considerable distance upwards, and also outwards as far as the zygoma; pressure over the common carotid greatly diminished its intensity. The eyeball could be pressed backwards nearly into its proper place, but in so doing communicated to the fingers a strong pulsation. A pulsating motion of the eyeball was also readily seen in profile view. Pressure over the common carotid caused almost complete cessation of the pulsation, with softening and reduction of the swelling in the orbit. Under these circumstances there could be no reasonable doubt that we had to do with an arterio-venous aneurism.

Dr. Shepherd and several other members of the hospital staff kindly examined the case with me, and it was decided to ligate the common carotid without unnecessary delay. The reasons for this decision were as follows: Pressure over this artery caused reduction of the protrusion of the eye, softening of the orbital swelling, and almost complete abolition of pulsation, without distress or inconvenience to the patient, who was, moreover, a young,

healthy and vigorous man, and likely to bear the operation well. The recent increase in the swelling, attended as it was with severe pain and rapid deterioration of vision, threatened irreparable damage to sight unless some speedy means of relief could be obtained. The man himself was exceedingly averse to any form of treatment that did not promise an immediate cure.

On the following day, May 25th, Dr. Shepherd ligated the common carotid in the upper part of its course, with the usual antiseptic precautions. Two ligatures were placed around the artery and the vessel severed between them. The edges of the wound were brought together over a decalcified bone drainage-tube and an antiseptic dressing applied. The immediate effect of the operation on the orbital tumor was the same as had been temporarily obtained by digital compression, only somewhat greater—*i.e.*, softening of the swelling, partial reposition of the eye, great diminution in the pulsation, and total cessation of the bruit. Recovery from the anæsthetic (ether) was perfectly normal, without the slightest sign of impairment in the cerebral or nervous functions.

May 26th.—Proptosis greatly diminished, the conjunctival œdema has nearly disappeared, vision greatly improved, and the voluntary movements of the eyeball are tolerably free. There is no diplopia, and the patient feels perfectly comfortable.

27th.—Uninterrupted improvement.

28th.—Feels quite well and "can see nicely" with the affected eye. V. $\frac{20}{30}$. States that since the operation there has been no noise in the ear. Proptosis now only slight in degree.

June 4th.—Dressings removed from the neck to-day; the wound found to be completely healed and the bone drainage-tube entirely absorbed. Can see as well as ever. V. $\frac{20}{20}$. Movements of the eyeball appear to be entirely normal; the globe, however, is still somewhat displaced forwards.

June 12th.—Patient thinks himself cured and declines to remain longer in hospital. Beyond a slight fullness of the orbit there is no indication of the recent orbital affection.

Compound Dislocation of the Astragalus.—Dr. Hingston reported a case of dislocation of the astragalus, in which the

patient removed the dislocated bone. The patient was a man of about 25 years of age, who fell with his foot twisted under him; on endeavoring to rise he noticed a bone protruding from the region of the ankle-joint. This was loose and he removed it himself with a penknife and brought it to Dr. Hingston, who said it was the astragalus. The patient made an excellent recovery.

Selections.

On the Treatment of Cholera.—Dr. George Johnson, Emeritus Professor of Clinical Medicine at King's College, London, in a clinical lecture published in the *Medical Press* of September 26, gives the following important views regarding the treatment of cholera:—

"In reference to the production of cholera in animals artificially, Dr. Koch has shown that he could produce cholera in guineapigs if he was careful before introducing the poison to inject opium in order to prevent the rapid escape of the poison from the intestinal canal. Now the opium treatment is somewhat analogous to this, since it tends to prevent the escape of the poison. Some men who have been constrained to admit that after all it might be best to allow the choleraic discharges to go on, object to encourage them by giving castor oil. But as a matter of fact the oil does not increase the discharges from the blood at all, but merely expels what is lodged in the intestines. The poison in this way is got rid of, and large masses of a gelatinous fœtid material are often brought away, which have been left behind in spite of profuse diarrhœa. More than one Indian surgeon alludes to the necessity of giving purgatives to get rid of this offensive and injurious material. It is quite obvious that the main object of treatment in the early stage of cholera is to prevent it from passing into a stage of collapse. My personal experience during the two epidemics I have had to deal with is very conclusive. I may safely say that I have never seen a case of diarrhœa pass into collapse under the castor oil treatment, and my experience is confirmed by that of Drs. M'Cloy and Robertson, of Liverpool, as recorded in the

5th volume of the *Med. Chir. Transactions.* They state that of several thousand cases of choleraic diarrhœa treated by evacuants, not one passed into collapse, and they declare that 'in every case relief was afforded pleasantly, quickly, and safely.' In contrast with that I may quote the result in two hundred cases treated with opium by two well-known French physicians; of that number twenty-six passed into collapse, though whether they died is not said. Fortunately in most cases the diarrhœa goes on in spite of the opium, and this is no doubt the main reason why the opium treatment is not more fatal than it actually is. Even in such cases, however, it often prolongs the illness. I may mention the case of a celebrated surgeon who returned to England at the close of the epidemic after his autumn holiday. He was seized with diarrhœa on his arrival home, and took several doses of opium. The diarrhœa continued and he came to me at the end of the week in great discomfort with a pale face, coated tongue, etc. He had evidently stored up in his intestines a quantity of abnormal excretions. I persuaded him to take a dose of castor oil, and he got well at once. The case shows you the ill-effect of opium even in ordinary cases.

"One author has published several cases treated by opium, which he calls 'consecutive fever without collapse.' These cases were really cases of diarrhœa, in which formidable symptoms had followed the retention of poisonous matter in the alimentary canal. A case which occurred during the epidemic of 1866 is interesting as showing the comparative effect of opposite treatment in the same individual. The patient was a youth in Blackfriars, who had drunk water from the Temple pump, which was recognised to have given rise to cholera. The diarrhœa had been arrested with opium. I found him in state of collapse and pulseless. The alimentary canal was obviously distended by a large quantity of fluid, which had accumulated in consequence of none having passed for several hours. I am convinced that if left alone he would have died soon. He was given several doses of castor oil during the night, had a free action of the bowels, the next day he was much better, and he gradually made a good recovery.

"This is a very striking and valuable lesson. The effect of the opium was to cause distention of the bowels, and you see the good results that follow the evacuation of the resulting accumulation. During the epidemic of 1854 I saw more than one case in which the bowels were quite unable to empty themselves in consequence of detension thus caused. Even castor oil did not give the slightest aid, and they all proved fatal.

"In consequence of the futility of giving drugs by the mouth, some practitioners have given hypodermic injections of morphine. These are peculiarly dangerous, because absorption from the subcutaneous tissue is so very rapid that they prove directly poisonous. I have already pointed out that absorption is suppressed in the alimentary tract, hence drugs requiring to to be absorbed are quite inert. Castor oil acts locally, and, therefore, still produces its physiological effects. It is worse than useless to feed patients in collapse; even milk does harm. The only thing to give them is cold water. In extreme cases, when circulation is almost at a standstill, I think it is perfectly justifiable to inject hot saline solutions. Out of twenty patients injected at the London Hospital five recovered, a very good result when one considers that under ordinary circumstances they would probably all have died. Venesection, as I have said, owes its effects to the relief of the cardiac and venous congestion. The cramps are best relieved by fomentation and friction, they rarely occur during reaction, and are probably caused by the presence of the poison in the blood.

"When a patient dies from cholera muscular movements have often been observed for a considerable time after death. People have supposed from such movements that the patient was put on the table before he was dead, but they are really due to the stimulus of the cholera poison acting on the muscles or nerve centres after death.

"During reaction it is necessary to be very careful in feeding a patient. The fever is often of considerable severity; the lungs get congested by the intense oxidation which goes on in the blood, resulting in the production of more carbonic acid than can be got rid of. There is a very marked contrast be-

tween the lungs of patients dying during collapse and during reaction. In reaction the lungs are gorged with blood, and very heavy.

"The principles which underlie my treatment of cholera apply to some extent to the diarrhœa of typhoid fever. Many years ago it was the practice in this hospital to give opiate injections to stop the diarrhœa, and I have had a large experience of this method of treatment. The effect of the opium is to render the bowels more or less torpid, a large amount of putrid material in the bowels accumulates, which undergoes decomposition, and gives rise to distension and further irritation. The general practice here of late years has been to leave the diarrhœa alone, discontinuing the beef tea and giving milk alone if it becomes troublesome. It is evident that nothing is more likely to lead to rupture of the ulcerated intestines than their distension, and this distension, as I have shown, is the only effect which can reasonably be expected to follow the opium treatment."

The Sacrifice of Education to Examination.—There is a natural tendency in all students to look upon the purposes of education as fulfilled by passing those examinations which are necessarily preliminaries to their professional career. Some men work for a pass diploma, others for university honors, but few work with the steadfast object of obtaining mental culture and true knowledge. Sir Andrew Clark, in his address at the opening of the new medical school at Sheffield, vehemently and eloquently expressed the opinion that this domination of education by examination was inimical to much that was vital in true education and essential to thorough work, and Mr. Teale at Leeds spoke weighty words to the same effect. Educational methods and the ever-rising standard of professional examinations have much to do with the lack of a desire for higher learning. It is, of course, necessary to have a high and uniform standard of examinations; but is it wise constantly to raise the severity of these pass tests, which intensify the work of the curriculum but too often limit the field of thought? The time

of the student and the teacher are so much absorbed by the necessary routine work of preparation for examination that but little opportunity is given for reviewing general principles and the bearing of cognate sciences upon medical practice. The average London student has no time to make acquaintance with the Hunterian museum, and to see the bearing of comparative anatomy upon pathology as the founder of that great museum would have taught it; to most students the evolutionary hypothesis and the works of Charles Darwin have no connection with the knowledge of physiology and disease; examinations leave no time to give instruction in such matters. Medical students have but little acquaintance with medical literature, the best books of the past are rapidly becoming unknown, even by name, to most of the rising generation, so that they are not likely to read them in their post-graduate leisure before the pressure of business life begins. It is thought that a knowledge of the latest theory, fact, or physicial sign is of more importance than an acquaintance with the thoughts of great men of the past; certainly this is true as regards examinations. It is for such reasons that many a pass man excels the successful candidate for university honors, excessive work for examinations cripples rather than expands true mental growth. The preponderating influence of examinations tends to destroy the best teaching; under it the teacher tends to lose his own intelligent self-direction. Examination is a good educational servant, but a bad master; it is useful for mediocre men, but to the really intelligent student it affords but a mechanical guide, leading him to seek academic successes rather than the full possession of his mental faculties. The real object of medical education, as Mr. Erichsen well put it in his address to the students of King's College, is to train the mind to remain open for the reception of truth throughout life, and to enable it to meet the varying emergencies of professional life. Still a system of examinations appears to be a social necessity; the only practical question is, how to lessen its evils? Examination questions might be less directly taken from books; the candidate's personality might be stimulated by calling upon him to state how he would proceed

under certain difficult circumstances. Scholarships are founded for the encouragement of learning, and in framing examinations for the selection of scholars it might be well to extend the plan followed in some cases of making these tests serve the purposes of extending knowledge on a wider basis, rather than of intensifying the acquisition of bigger heaps of facts.—*Brit. Med. Jour.*

Students and Work.—To students who are diligently inclined, it is as refreshing to get back to systematic work once again as it is, at the end of the session, to lock up the books and turn to less arduous occupations. The discipline of lectures and classes is as invigorating as the cold blast which heralds the approach of the winter, and the fact of having plenty of work to do, coupled with the will to do it, is an excellent and consoling set off to the dreariness of the autumnal skies. The energies must be braced up for a good six months' "spell" of work, broken only by the ephemeral and short-lived festivities of Christmas time. No one can dawdle with impunity under present requirements. Every moment lost at the beginning will have to be paid for later on, a fact that the beginners are apt to ignore in the happy excitement of their new surroundings.—*Hospital Gazette.*

Physiological Action of Iron.—In a preliminary note in the *Vratch*, No. 29, 1888, p. 561, Dr. Skvortzoff publishes the results of experiments on dogs, carried out by him in Professor Tümas's Pharmacological Laboratory in Warsaw, with the view of determining the action of iron on nitrogenous metabolism in a healthy organism. The following are his conclusions: 1. Iron has no marked influence on the nitrogenous metamorphosis in a healthy system. 2. On the internal administration of iron in daily doses over 0.02 or 0.03 gramme, the assimilation of the nitrogenous ingredients of food decreases, though but slightly (from 98.4 per cent. before the experiment to 97.0 per cent. during it). 3. After venesection the assimilation somewhat increases, both on the administration of iron and without it. 4. On the administration of iron with food after venesection, the restoration of hæmoglobin proceeds more rapidly than without iron. 5. The same holds true in regard to the body's weight.—*Brit. Med. Jour.*

THE

Montreal Medical Journal.

VOL. XVII. NOVEMBER, 1888. No. 5.

THE TREATMENT OF THORACIC ANEURISM.

Prof. Sée of Paris has recently given an account of the result of the treatment of twenty-four cases of thoracic aneurism under his care. The treatment employed in the majority of the cases reported was a combination of the iodine of potassium with antipyrin. In twelve out of seventeen cases treated after the manner described there was a considerable reduction in the size of the tumor, and a disappearance of the painful and distressing symptoms so frequently present in cases of thoracic aneurism. It is claimed for the antipyrin that it greatly assists the action of the iodide of potassium—that it calms the circulation and therefore tends to promote coagulation in the sac. Our knowledge of the action of antipyrin on the circulation is as yet in a very imperfect state, and from what we do know it is doubtful whether the claims advanced for this agent by Sée are likely true. Antipyrin has no doubt an influence, when given in full doses, of increasing the blood pressure. This action, instead of promoting, would certainly retard the coagulation of the blood in the sac. No doubt good indirectly will follow the use of antipyrin in relieving pain, but it may be a two-edged weapon, and until our knowledge of its action is more precise, its administration in aortic aneurism should be very carefully watched.

It appears to us to be more clearly proved that the action of the iodide of potassium in aneurism is brought about by its lowering influence on the blood pressure, and to combine it with a drug (antipyrin) which increases the pressure is very empirical work. Sée points out the great advantages of the potassium

over the sodium iodide in these cases. This is evident when we remember that it is the potassium and not the iodine which is the active vascular agent.

PROFESSOR WILLIAM OSLER.

Dr. Osler has accepted the positions of Professor of Medicine in the Johns-Hopkins University and Physician to the Johns-Hopkins Hospital. This great school is now gradually making preparations for an early opening. Among many good appointments, none have been wiser than that of Dr. Osler's. Much will be expected of him in his new position, and we confidently predict that the response will exceed the expectations.

THE NEW VOLUME OF THE INDEX CATALOGUE.

We have received the ninth volume of the "Index Catalogue of the Library of the Surgeon-General's Office, United States Army." The present number begins with "Medicine" and extends to "Nymelt." No pains have apparently been spared to make it a complete and exhaustive account of the literature embraced under the above letters. The editors of this monumental work deserve the warmest thanks of the profession.

INTERCOLONIAL MEDICAL CONGRESS, MELBOURNE, 1889.

We have received the following letter, which we take pleasure inserting in full, from the General Secretary of the Intercolonial Medical Congresss. We congratulate our Australian brethren on their enterprise, and hope that their Medical Congress will prove in every way a successful meeting:—

UNIVERSITY OF MELBOURNE,
6th August, 1888.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,—I have the honor to inform you that an Intercolonial Medical Congress of Australasia will assemble in Melbourne in 1889, meeting on January 7th and rising on the 12th. I

forward by the same post the circular issued by the Executive Committee. On behalf of the Committee I request you to be good enough to give prominent notice in your journal to the fact that such a Congress will be held, and to announce that accredited members of the profession in Canada who visit Melbourne at that time will receive a very hearty welcome, and will be associated in all the work of the Congress. At least four or five hundred of the most representative members of the profession in Australasia will then meet in conference, including the medical advisers of the various governments, nearly all the professors and lecturers in our medical schools, the inspectors of lunatic asylums in the various colonies, etc. The Congress is under the patronage of the governors of all the Australasian colonies, and the premier and ministry of Victoria have promised their active support, and, in particular, have undertaken the publication of the transactions of the Congress.

Free passes over the Victorian railways will be granted to visitors attending the Congress from America.

The Centennial Exhibition will be in full activity, and no better occasion could be found for a visit to Australia.

Addresses will be given in all the sections. General debates will be held in full session on the diseases peculiarly prevalent in Australia. Abundant papers and exhibits will be submitted in the sections by our leading men.

A Congress museum will be prepared, and as complete a collection as possible of Australian drugs will be exhibited.

Requesting you kindly to give extended notice to the Congress, and to publish our invitation and promise of welcome,

I am, dear sir,

Very faithfully yours,

H. B. ALLEN, MD., *Secretary to the Congress, and Dean of the Faculty of Medicine in the University of Melbourne.*

Medical Items.

—There are 256 practitioners in Los Angeles, California.

—It is reported that a case of hydrophobia has been cured in St. Louis. From the symptoms, it looks more like a case of hysteria.

—During the last three years nine deaths have been reported in Australia from the inhalation of chloroform. It takes a long time for some surgeons to recognize the deadly effects of this anæsthetic.

—The *University Medical Magazine* is a new monthly periodical issued by the professors and alumni of the University of Pennsylvania. The first number contains a number of valuable articles.

—When Dr. William Pepper of Philadelphia was asked for the bill of his services in connection with the case of the late Dr. Sheridan, he replied that he desired that his services should be regarded only as an expression of that deep and lasting obligation which he in common with others owed the deceased.

Alcohol and Cirrhosis of the Liver.—M. Alison (*Archives Générales de Médecine*), after an exhaustive consideration of the effects of alcohol on the economy and its special action on the liver, believes that the business of the individual, outside of the cause commonly attributed to cirrhosis, plays an important *rôle* in its development. Field laborers are rarely attacked by it, and it is more rare in persons given to manual labor than in those who lead sedentary lives. He advises physical training as an effective therapeutic.—*Med. News.*

Publisher's Department.

—Dr. A. J. Willard of Burlington, Vt., U. S. A., expects about the first of November to occcupy a new sanitarium which he has been building for his Nervine Establishment. This institution appears to have met with excellent success, and Dr. Willard has every reason for encouragement. The Rest Treatment of Dr. S. Weir Mitchell is here made a specialty, although other methods of treatment are used as they seem indicated.

THE

MONTREAL MEDICAL JOURNAL.

VOL. XVII. DECEMBER, 1888. No. 6.

Original Communications.

THE CONSTITUTION OF McGILL UNIVERSITY.

BEING THE ANNUAL UNIVERSITY LECTURE OF SESSION 1888–89.

BY PRINCIPAL SIR WILLIAM DAWSON, C.M.G., LL.D., F.R.S.

The subject of this lecture has been suggested by the departure from among us, within a few years, of several old and valued members of the university, and by the fact that the men who took part in the revival of McGill University under its amended charter of 1852, have now almost entirely passed away, while the few who remain must soon follow. It is therefore desirable that the new generation which has come upon the stage should know something of the causes which gave our university its present constitution, and which have in some respects moulded that constitution as time has proved its original excellences or defects. Great universities are not usually created by any sudden or arbitrary act of establishment. They grow by slow accretion of men and means, and adapt themselves by degrees to the changing conditions of their existence, while the value and stability of their organization are proved by the vitality and vigor of growth which they exhibit, and the capacity which they show to continue in efficiency after their originating minds have passed away. McGill is now in the position to show the capabilities of its constitution in this respect.

Of the original band of citizens of Montreal who constituted the first board of governors under the new charter, Mr. Ferrier, the late Chancellor, was the sole survivor. Mr.

David Davidson, it is true, one of the most able and zealous of these men, still lives, but he has long since removed from Canada and has resigned his connection with the university, though showing his interest in education in Montreal by continuing his gold medal in the High School. Of the staff of professors organized between 1852 and 1855, not one now remains on our list of teachers except my friend Dr. Howard and myself. A few others still live, but have retired from active work. Thus the men of the university have passed away and have been renewed in about thirty-three years, and the government and educational work are for the most part in new hands, while ten generations of students have in the meantime graduated and have gone into the active work of life, and very many of them are older men than Dr. Howard and I were thirty years ago, and are now occupying the most important positions in the university and in public life.

McGill University, like many of the greater universities and colleges of other countries, originated in a private endowment. It is, however, almost alone in this respect among the colleges of Canada, and owes I think much of its prosperity and success to this fact, more especially in connection with the unique position which it occupies as the highest educational institution of an influential, progressive and intelligent minority in this city and province.

The founder of the university, James McGill, was born on the 6th October, 1744, in Glasgow, Scotland. He received his early education and training in that country, but of these little is known. He arrived in Canada before the American revolution, and appears, in the first place, to have engaged in the Northwest fur trade, then one of the leading branches of business in Canada. Subsequently he settled in Montreal, and, in partnership with his brother, Andrew McGill, became one of the leading merchants in the little town of about nine thousand inhabitants which then represented our commercial metropolis. His settlement in Montreal, and his marriage with a lady of French parentage, the widow of a Canadian gentleman, occurred a little before the beginning of this century, and from that time till his death, in December, 1813, he continued to be a prominent citizen of Montreal, diligent and prosperous in his business, frank and social in his habits, and

distinguished for public spirit and exertion for the advancement of the city. His name appears in several commissions relating to city matters—for instance, that for removing the old walls of Montreal. He was Lieutenant-Colonel and subsequently Colonel of the Montreal City Militia; and in his old age, on the breaking out of the American war of 1812, he became Brigadier-General, and was prepared in that capacity to take the field in defence of his country. He represented for many years the West Ward of Montreal in the Provincial Legislature, and was afterwards a member of the Legislative and Executive Councils. Mr. McGill is described by his contemporaries as a man of tall and commanding figure—in his youth a very handsome man, but becoming corpulent in his old age. He was a prominent member of the association of fur magnates known as the "Beaver Club." A reminiscence of a gentleman, then resident in Montreal, exhibits him, when an elderly man, at one of their meetings, singing a voyageurs' song with accurate ear and sonorous voice, and imitating, paddle in hand, the action of the bow-man of a "North canoe" in ascending a rapid. The remembrance of another contemporary represents him as much given to reading and full of varied information; and it is certain that he cultivated and enjoyed the society of the few men of learning from the mother country then in the colony. There are, indeed, good reasons to believe that his conferences with these gentlemen had an important influence in suggesting the subsequent disposal of a large part of his fortune in aid of education.

In this connection it may be stated that Mr. McGill's resolution to dispose of his property in this way was not a hasty death-bed resolve, but a mature and deliberate decision. He had taken a lively interest in the measures then before the Government for the establishment of an educational system in the Province of Quebec, and had mentioned, many years before his death, his intention to give, during his lifetime, an endowment in aid of a college, if these measures should be carried out by the Government. But many delays occurred. From 1802, when the act to establish the "Board of Royal Institution for the Advancement of Learning" was passed, until the time of Mr. McGill's death, the persistent opposition

on the part of the leaders of one section of the people to any system of governmental education, and the apathy of some of the members of the Council, had prevented the appointment of the Board, or the completion of the liberal grants of land and money for educational purposes which had been promised. Mr. McGill was apparently weary of these delays, and feared that he might be cut off by death before he could realize his intentions. He had also the sagacity to foresee that a private endowment might force the reluctant or tardy hands of the members of Government to action. Accordingly, in his will, prepared in 1811, more than two years before his death, he bequeathed his property of Burnside, and a sum of ten thousand pounds in money, to found a college in the contemplated provincial university, under the management of the Board of Royal Institution; but on condition that such college and university should be established within ten years of his decease. Three leading citizens of Montreal, the Honorable James Richardson, James Reid, Esq., and James Dunlop, Esq., and the Rev. John Strachan, afterwards Bishop of Toronto, were appointed Trustees under the will. The wise liberality of a good man is often far more fruitful than he could have anticipated. Mr. McGill merely expressed a wish to found a college in connection with a university already provided for by the generosity of the British Government. But the grants promised the university were not given, and the English settlers in the province of Quebec were deprived of the provisions for education made by the liberality of the Crown in other colonies. In the providence of God, Mr. McGill's bequest intervened to avert some, at least, of the evils arising from this failure. In consequence of his will, a pressure was brought to bear on the Government, which resulted in the appointment of the Board of Royal Institution in 1818; and though, from the refusal of the French to take part in it, it was almost entirely English in its composition, it proceeded to the establishment of non-denominational schools. These schools were never very numerous—about eighty being the maximum number; but they formed the beginning of the present school system. The Royal Institution, being a Government board, had, on that account, too little of the popular sympathy, especially among the settlers

in the Eastern Townships; and the Local Legislature practically refused to acknowledge it, and set up in opposition to it the denominational system of "Fabrique schools" in the French parishes; and, finally, its functions were restricted to the McGill College alone, by the new Education Act which followed the rebellion of 1837.

In so far as the McGill College was concerned, the Royal Institution at once took action by applying for a royal charter, which was granted in 1821, and prepared to take possession of the estate. This, however, owing to litigation as to the will, was not surrendered to them till 1829. They also demanded the grants of land which had been promised, and received fresh assurances; and, as an earnest of their fulfilment, the Government of the day was authorized to erect a building for McGill College, and to defray the expenses out of those "Jesuits' estates" which have in our own time given to the Legislature of Quebec so startling and exceptional celebrity. But the hopes thus held out proved illusory, and the college buildings had to be begun with the money left by Mr. McGill, and were at length completed only by the liberality of another citizen of Montreal, the late Mr. William Molson.

In the year of Mr. McGill's death, the population of Montreal was scarcely fifteen thousand, and of these a very small minority were English. One-third of the houses were wooden huts, and the extent of the foreign trade may be measured by the nine ships from the sea, of an aggregate of 1,589 tons, reported as entered in the year 1813. The whole English population of Lower Canada was very trifling. There was no school system, and there were no schools, with the exception of the seminaries of the Church of Rome, and a few private adventure schools. It seems strange that, in such a condition of affairs, the idea of a university for Montreal should have occurred to a man apparently engaged in business and in public affairs. Two circumstances may be mentioned in explanation of this. The first is the long agitation on the part of some of the more enlightened of the English colonists in behalf of the establishment of a university and a system of schools. As early as 1787 the Legislative Council had taken action in the matter, and had prepared a scheme of general

education; but this infant Hercules was, according to the testimony of Abbe Ferland, in his life of Bishop Du Plessis, "strangled in its cradle" by a remonstrance written by Du Plessis. In 1801, the project was revived, and the Act for the establishment of the Royal Institution was passed; but the new scheme was for the time foiled by the refusal of the Roman Catholic clergy to act on the board; so that, as another learned priest, Rev. M. (now Bishop) Langevin, informs us in his "Cours de Pedagogie," it was without result, "thanks to the energetic vigilance of the Roman Catholic clergy." Mr. McGill was familiar with these movements, and no doubt was somewhat displeased with the "energetic vigilance" above referred to, and with the yielding of the Government to such opposition. He knew what colleges and a school system had done for his native country, and that the withholding of such a system from the new settlers in this province would involve semi-barbarianism, leading to poverty, discontent, superstition, irreligion, and a possible war of races. In so far as these evils have been averted from the Province of Quebec, he has certainly contributed to the result more than any other man of his time.

A second circumstance which may have aided Mr. McGill in his resolve was of a different and more personal character. In 1897, General Simcoe, the first Governor of Upper Canada, and his Executive Council had decided to establish a seminary of higher learning in that province. They had invited Mr. Strachan, a graduate of St. Andrew's, to organize this institution. He arrived early in 1799, but only to find that his patron, Gen. Simcoe, had been removed, and that the plan had fallen to the ground. Greatly disappointed by this, Mr. Strachan opened a school in Kingston, and subsequently occupied, as a clergyman of the Church of England, the mission of Cornwall, and commenced the Grammar School at that place, where many men, subsequently of note in Upper Canada, were educated. A year before McGill's death, Strachan was transferred to Toronto, of which diocese he was afterwards Bishop. The precise circumstances which introduced to each other the future Bishop and the Montreal merchant are unknown to me. It is certain, however, that they were friends, and that the young man who had come to Canada with such bright

hopes of educational usefulness, destined for the time to be disappointed, and the wealthy citizen meditating how best to disarm the opposition which had so long deprived Lower Canada of the benefits of education, had much in common. It seems at least highly probable that Strachan had a large share in giving to Mr. McGill's wishes the form which they afterwards assumed, and there are some reasons for believing that Mr. McGill had hoped that his college might have attracted to it the abilities of the young teacher who seemed slighted in Upper Canada. It is also known that in the first attempt to organize McGill University, in 1823, Strachan was invited to a professorship; but the career opening to him in Upper Canada was already too tempting to permit him to aid in this way the project of his old friend.

The value of the property bequeathed by Mr. Jas. McGill was estimated, at the time of his death, at £30,000; and it has since become much greater, owing to the growth of the city. The sum was not large in comparison with many other educational bequests; but it would be difficult to estimate its value to Canada in general, and to Montreal in particular. Gathering around it the gifts of other liberal men, it has sustained the McGill University, and carried it on to its present point of usefulness and success as a source of literary and scientific culture. Hundreds of professional men in all parts of Canada bear testimony to its value; and the city derives from it much of its higher character as a centre of learning and practical science. Indirectly, it has benefited the cause of common and Grammar school education, through the action of the Royal Institution, through the services of students and graduates as teachers, and through the McGill Normal school, which, though supported by Government, would scarcely have been established but for the influence of the college. Those who have in these ways received its educational benefits are to be found in all parts of the country, contributing by superior skill and intelligence to the common good. If the future may be anticipated from the past, its utility will, in the time to come, go on increasing and widening, growing with the growth of our country, and pervading all departments of useful and honorable occupation. The experience of older nations has shown that such educational endowments survive

all changes, and go on, bearing fruit from age to age. It will, doubtless, be so here also, and the time will come when the original endowment of McGill will appear but as the little germ from which a great tree has sprung—or as the spring which gives birth to a mighty river.

THE AMENDED CHARTER.

I have referred at some length to these points because they constitute an important element in the origin, not only of the university, but of its constitution, as based on its royal charter. As already stated, this was granted in 1821, and under it were carried on for thirty years the early operations of the university—embarrased by pecuniary difficulty, owing to the failure of the Government to give the promised public aid, and by the structure of the charter itself, which was cumbrous and unwieldy, and unsuited to a small college in the circumstances of this country. The result was that, after nearly thirty years of struggle, the university, with the exception of its medical faculty, was almost extinct, and that it was without sufficient income even to sustain the scanty staff which it then possessed in the faculty of arts. Its existence at this time seems to be largely due to the persistency with which the late Vice-Principal, Ven. Archdeacon Leach, clung to its interests. It was then that several gentlemen, citizens of Montreal, assumed the responsibility of its renovation, and secured an amended charter under which its latter work has been carried on.

Of the noble band of men who at that time undertook this herculean and, in the view of many, desperate task, Day, Ferrier, McGill, Anderson, Davidson, Coffin, Ramsay, Holmes, Robertson and Dunkin, none has left more of the impress of his mind on our constitution than the last named, the Hon. Christopher Dunkin. Dunkin was a man of high culture and eminent ability. He had passed through a somewhat exceptional university career. The son of a widow with limited means, he entered the University of Glasgow at the age of fifteen, and came out at the end of the session as the highest prizeman in his class. In the meantime the new University of London had been established; and as his mother resided in that city, he naturally left his Glasgow college and entered the

new Metropolitan university. Here, in his second year, he again carried off the highest honors. His mother having married Dr. Barber, who had been appointed instructor in elocution at Harvard University, he followed her to the United States and completed his college career at Harvard, where he was appointed a tutor in Greek before he had attained the age of twenty-one. He came to Canada and entered on the study of law shortly before the stirring times of 1837, and was engaged under Lord Durham and Mr. Buller in drawing up the celebrated report which prepared the way for responsible government and the existing constitution of this Dominion. A preparation so varied and extensive added to his acute intellect, his unwearied industry and his intense educational zeal, admirably fitted him to be the acting member of the new Board in the amendment of the charter and constitution of the statutes of the university, which still remain essentially as they were when they left his hand. But it required all the influence and business capacity of his colleagues, and especially the tact and experience of Judge Day and the strong faith and Scottish persistency of Mr. Ferrier to give form and effect to his plans. One act of the latter gentleman deserves mention in this connection. He had been the president of the Board of Royal Institution, but voluntarily resigned his position in favor of Judge Day as the most fitting head of the university—to resume it under the better conditions of a much later time.

THE FACULTIES.

The several Faculties of McGill College have large independent powers. This grew up in the old condition of the university, when the faculty of medicine had to sustain itself and to carry on its own affairs almost independently, and the autonomy which it possessed has in many respects been extended by the statutes to the other faculties. Each faculty has independent powers of framing regulations as to details of the course of study, examinations, admissions, discipline and government of students, fees, and in general all things relating to the internal government and discipline of its portion of the university system. It has also judicial powers of hearing and determining complaints as to violation of its rules. These

wide powers are limited only in two ways. New regulations or repeal of those in force must be approved by corporation, and no student can be expelled without consent of corporation. The functions and powers of professors are determined in the first instance by the terms of their appointment by the governors, and as to details, by the rules and action of their faculty. The Dean of each faculty has the same general supervision in the faculty which the principal has in the university; and the dean of the faculty of arts is ex-officio, vice-principal.

The above portions of our constitution relate to the university and to McGill College, which is the University College, properly so called; all others being affiliated colleges of the university, though the charter gives power to have other colleges co-ordinate with McGill should endowments be given for them.

THE GRADUATES AND STUDENTS.

What shall we say in regard to this great body of the university itself, its hundreds of graduates and students, ranging from aged men who have long ago attained to the highest standing in their professions, and who are the seniors and magnates, not only in the academical sphere, but in the great world without, down to the newest freshman just come up from school. This great body has also under our constitution its duties, its rights and privileges as varied as the differences of its members in age and standing.

Let us begin with the student. He may be defined to be one who is in the intermediate stage between a school-boy and a graduate. In this condition he is still *in statu pupillari*, but not at all in the school-boy stage, while he has not reached to the freedom which he attains after taking his degree. He has become a member of the university, a proud title which connects him with much that is best and greatest now and in the past. In the words of our old charter, he has acquired the "liberty and faculty of taking the degrees of bachelor, master and doctor in the several arts and faculties at the appointed time," and has "liberty within himself of performing scholastic exercises" to that end. You observe his position is expressed by the words "liberty and faculty"; but these are to be used for a special purpose. He has not liberty and faculty to be

idle and waste his time, or to occupy himself with matters foreign to his educational course, or to the objects for which the university is instituted, but liberty to take certain degrees and perform such exercises as may tend thereto. The same liberty in short, that a runner has who follows a definite course marked out for him, and strains forward to a goal that he may win a prize. Yet this is liberty in the true sense. The runner is not driven onward by dread of the lash, he runs freely, becaues he desires to do it, yet with regard to the rules of the course, because he values the victory and the prize. The student is not a slave, but an athlete; and a main object of the college is to train him to act thus for himself, well and wisely. The student is very apt not to realize the full importance and responsibilities of his position. Many men of greater age fail to do this. But no greater service can be rendered to him than to direct his attention to the fact that all the machinery of the university exists for him, and that in the few years in which he passes through his college course, he has to lay the foundations on which his life must be built. He has to lay these for himself, for all that the best academic system can do is to give him the "liberty and faculty"—the means and opportunity—to educate himself.

If I say little here of the undergraduate societies, it is not because I think lightly of them. They are in truth most important, representing as they do the spontaneous efforts of the students in the directions of physical training, of culture of the powers of thought and expression, and of the higher spiritual life. The Athletic and its several clubs, the Literary and the Delta Sigma and the Young Men's Christian Association and the Theo Dora are all of the highest value with reference to these great ends.

The transition from the life of the student to the position of the graduate is one even more strongly marked than that from the school-boy to the student. As this has formed the staple theme for valedictory addresses from time immemorial, I do not propose to poach on the domain of the valedictorian, already so much at a loss for anything new or striking. There is, however, one phase of the position of the graduate which in the multitude of valedictories to which I have had the pleasure of listening, I have not observed to be much noticed,

and that is the new relation in which the graduate stands to the university, and which he not infrequently does not seem distinctly to comprehend. The student is under the tuition and control of a faculty. This relation ceases at once on his graduation. He no longer belongs to McGill College as such, or to any faculty of it, but to the university as a whole. As a student he was in a state of pupilage, being shaped and fitted by the hand of masters for the place he is to occupy. As a graduate he has left the workshop and has been set up on his own pedestal, in presence not merely of his classmates, but of the world. As a student he is fed with milk and nourished as a child of the university, as a graduate he earns his own manly food and may hold out his strong arm to sustain the mother that has nursed him. Graduates should keep these things in mind, and should be prepared to weigh well their true relation to the university, which now entails grave duties of aid and support rather than advantages to be enjoyed by them, and which connects these duties with the university as a whole rather than with any particular college or faculty.

The graduates are a great and increasing element in the constitution of the university. Individually the success in life of every graduate is a recommendation of his university, and he has much power to advance its interests both by commending it to others and by giving it, as many have done, substantial aid. Collectively the graduates can do much as a society, by aiding in our struggles against obstacles which meet us in this province, by promoting all improvements and movements in advance, by placing us in better relations with non-academical world; and in general by lending their countenance and support in every way to the cause of higher education. Much of this legitimately belongs to the Graduates' society; and it would seem that the time has arrived when this might enlarge itself by having, as in the case with the large American universities, branches in various parts of the country. Above all, under the constitution, the graduates enjoy a large share of influence in the corporation. Sometimes this is measured by their number of direct representatives, but that is a mistake. Eight members in a body of forty-four may seem to be a small representation, but in our corporation there are at present nine other graduates who

have seats otherwise than by direct representation, making seventeen in all, and it is absolutely certain that at least half of the available members of corporation, that is of those who can ordinarily attend meetings, will always be graduates of this university, and that the proportion of graduates must tend constantly to increase. But representation in a college corporation does not depend merely on numbers. One leading, influential and popular man, regular in his attendance and zealous for good, is of more value than a dozen who are inert, careless, or unnecessarily aggressive. Careful selection of good representatives and retaining them in office for a number of years, and allowing them to be absolutely free and untrammelled by any previous pledges, will give weight and power to the graduate representation, and will constitute an argument for its further extension. The graduates, I think, are becoming more and more aware of this, and are taking more interest in the election of their representatives.

RELATIONS TO THE PUBLIC.

I have how exhausted the more important element in our constitution. To a careless listener or reader it may seem complex and cumbrous, but, after an experience of many years, I see no reason to doubt its working efficiency, and it is deserving of notice that few jars or conflicts have characterized its action, and while there have no doubt been differences of opinions as to details, there has been practical unanimity as to important methods and principles, while there has been unquestionable progress in every department—progress indeed necessarily intermittent and unequal; for we cannot advance without now and then placing one foot in front of the other; and in a body where there are so many interests represented, and where no one will can be dominant, there must always be occasional delays and detentions, trying to some. I have myself a large packet of "abortive schemes," containing projects started but nipped in the bud, and which I look over now and then to see if the time is approaching when any of them may have practical effect. Others may have like schemes and projects, but we must be content to wait. No constitution is perfect, but ours has at least the merit of having grown to suit our environment, and if this

growth continues in a natural manner we may hope that when the present sapling becomes a stately tree it will preserve its regularity and symmetry, and will be so adjusted and proportioned in its parts that no storm will uproot it or break it down, and that it will stand as a thing of beauty and of perennial fruitfulness, as "a tree planted by the streams of water that bringeth forth its fruit in its season." Let us bear in mind that its growth is to be promoted and its safety secured, not by continual attempts to bend it hither and thither, to lop off a branch here and there, or to cut into some shape that pleases present fancies, but by giving its roots due nourishment and allowing it freedom to develop itself in the air and in the sunlight. The three great enemies it has to dread are the borers and caterpillars that nestle in the wood and foliage, the ruthless woodman who would girdle its trunk or cut down its branches, and the lack of due nourishment from the soil which supports it.

To drop the figure, we have to dread in our circumstances: First, a selfish or reckless spirit growing up among ourselves, and a want of that enlightened devotion to the cause of education and the common good which characterized the founders and early friends of the university; Secondly, the effects of such unwise legislation as that which has recently consigned the control of our faculty of law to the tender mercies of an irresponsible professional board, on which the university has no representative; Thirdly, a failure of that aid and support on the part of the Protestant population of this city which has so far sustained us so liberally. I have space to say a few words only as to the last.

Hitherto McGill University has had the greatest cause to be thankful for the enlightened liberality of the citizens of Montreal, and it has often seemed as if that liberality was forthcoming just at the junctures when some pressing want was staring us in the face, without means of meeting it. The original endowment of Mr. McGill came at a great crisis in the affairs of this province, when there was danger that no adequate provision would be made for the educational wants of its English population. I can never forget the liberal subscriptions of 1856, which, headed by the endowment of the Molson chair of English, gave the first augury of success in

the revival of the university under its new charter. The completion of our university buildings by Mr. Wm. Molson in 1861 came at another critical time. The endowment of the Peter Redpath, Logan and John Frothingham chairs, in 1871-73, gave another stimulus and accession of force when our progress seemed arrested by want of means. The foundation of the Peter Redpath Museum in 1880 placed one important department in advance of every other Canadian university, and made way for extension in other directions. The Scott, Mills and David Greenshields endowments of 1882-84 were just in time to prevent contraction of our work under the great diminution of income arising from the fall in the rate of interest. The large endowments to the medical faculty in 1884-5 met the necessary expansion of its teaching power and of its rooms and laboratories demanded by the great extension of its course and increase of its students. The last great endowment, that of the Hon. Sir D. A. Smith, for the higher education of women, was offered at the moment when the university seemed called on to enter on this work without adequate means. Many such instances rise to my remembrance, and impress me with the belief that a kind Providence has watched over our efforts, and has intervened to sustain us just when hearts and hands were beginning to fail. I cherish the faith and hope that it will be so in the future, and look forward to the time when our law faculty will be adequately endowed, when our unendowed chairs in the faculty of arts will be suitably provided for, when our heavier chairs will be divided or furnished with assistance, when we shall have enlarged accommodation for our library, when we shall have a larger convocation hall, a dining hall and college offices, and rooms for college societies; when we shall have a college plant-house and botanical garden, a mechanical workshop, and a new university gymnasium, and when our special course for women will have grown into a well-appointed Royal Victoria College, co-ordinate with McGill. All these things and more are now desirable, and I have no doubt they will be provided, but not perhaps until our faith and self-denial and self-sacrificing industry are a little longer tried. They may not be realized in my time or the time of the older workers of to-day; but the university will not die with us. The history of college

endowments in the Mother Country shows that these are the most permanent of all investments, outliving revolutions, changes of dynasty and even civil wars, and tending constantly to attract fresh means to themselves. May McGill University equal them in permanence, and at the same time be exempt from the defects which have sometimes marred their usefulness, and from the abuses which for a time have grown up around them. We may, I trust, hope that in our new and young society, and in the greater light of a cultivated and progressive age, this may, under God's blessing, be our happy destiny.

CLINICAL MEMORANDA.

I.—Floating Kidney. II.—The Anatomical Tubercle.

By William Osler, M.D.
Professor of Clinical Medicine, University of Pennsylvania.

I.—*On Certain Symptoms of Floating Kidney.*

The condition in question may cause no other disturbance than a sense of weight or dragging in the abdomen, but there are cases in which more serious symptoms arise, partly the direct result of the dislocation and partly of the nature of what we term, in the absence of fuller knowledge, reflex phenomena. A remarkable instance has recently been under observation in the person of a physician, who gave the following history:

Aged 40, was of excellent family history, and had enjoyed good health, with the exception of dyspeptic attacks, until 1878, when he was obliged to give up practice owing to soreness on the right side and general weakness. He went abroad and gained 25 lbs. In 1879 he took a long voyage, and was seasick 46 out of 47 days at sea. He very nearly died of inanition, and at this time, when greatly emaciated, discovered "a moveable, smooth tumor (a lump), on sitting up and during inspiration, just below the margin of ribs on right side." He returned to practice in 1880, and until September 1887 kept at work, though never feeling comfortable in the abdomen, and at times suffering much with pain and flatulence. During this period he has had several attacks of intestinal and gastric trouble associ-

ated with pain, vomiting, constipation and then diarrhœa; the stools clay-colored, but neither the skin nor the urine were bile-stained. In September 1887 he gave up practice, and the abdominal symptoms have been somewhat better, though his general health has been impaired by an attack of epididymitis.

Examination showed a moderately well-nourished man; abdomen full, nowhere tender on pressure. Stomach tympany reached high in the chest, and "splashing" could be readily obtained by manipulation or by rapid contraction of the abdominal muscles. No tenderness in lower region. By making a forced inspiration or rolling quickly on to the left side the patient could cause a tumor to emerge in the right hypochondriac region, just beneath the edge of the liver, and which could be moved over to within an inch of the middle line. It was firm, rounded, and on its upper and anterior aspect a distinct depression could be felt. By pressure it could be made to slip back under the liver. There could be no question that this "abdominal tumor" which had caused so much mental and bodily distress for so long a time was the movable right kidney. In the erect posture a marked difference existed in the appearance of renal regions behind, particularly apparent in looking over the patient's shoulders. There was a distinctly deeper depression on the right side corresponding to the 11th and 12th ribs. Percussion gave flat tympany over the right renal region when the patient was on the left side or when the kidney was voluntarily dislocated by a deep inspiration. When it was pushed back, or when the patient lay on his back on the edge of the bed, there was dulness similar to that which existed on the left side. The urine was normal.

The symptoms have been chiefly gastric, and there is now moderate dilatation of the stomach, a condition which has resulted most probably from the pressure of the dislocated kidney upon the duodenum. Several instances of the kind have been reported. Gastro-intestinal attacks may be the only effect of a floating kidney, and the occurrence of paroxysms of pain with vomiting may even lead to the suspicion of organic disease. The condition in women is very often associated with nervous

symptoms, which complicate the problem of treatment. An abdominal bandage, with a well-adjusted pad, will in some cases give great relief, but not infrequently it seems impossible to retain the floating organ by mechanical means, and even nephroraphy is not always successful. I have known the *diagnosis* of the condition to be followed by relief to some of the most distressing symptoms, and in the above reported case, the patient, a doctor, took a substantial dinner—the first for many months—when it was announced that the "abdominal tumor" was only a floating kidney.

II.—*The Anatomical Tubercle.*

There have been of late years several very interesting observations upon the common post-mortem wart, or as it was named by Wilks, who first described it, *verruca necrogenica*. It is now very generally regarded as a local tubercle, the result of inoculation. The presence of bacilli has been demonstrated in several instances. They consist chiefly of granulation tissue, occasionally with giant cells, and with papillomatous outgrowths of the epidermis, which gives the tubercle the wart-like character.

They are met with in persons who perform many post-mortems, and in those whose business brings them into close contact with animals and animal products. Their occurrence is by no means infrequent. In Germany it is quite common to see the hands of the demonstrators of pathology (and more particularly the attendants in the autopsy rooms) disfigured by these structures.

I have myself eight or ten scars from these warts, which I have had at times on my hands during the past fifteen years. They rarely increase in size beyond a quarter of a dollar piece, are seldom painful, and are only unpleasant on account of the disfigurement. In my case they have lasted variable periods, from four or five weeks to eight or nine months. I have usually found them to disappear spontaneously. Thus, the last one I had was the result of accidental inoculation made from a phthisical subject early in November. I persistently refrained from local treatment in order to watch its development. It gradually spread, and after attaining the size of a ten-cent piece remained

quiescent, but did not disappear until June. As is often the case, it had several small colonies in its neighborhood.

In the treatment of these structures, I have usually found that the oleate of mercury persistently applied with friction causes rapid disappearance.

In Hutchinson's lectures on Lupus, which appeared in the *British Medical Journal* during the early part of this year, the anatomical tubercle is classed as "lupus necrogenicus," and a very good case is made out in favor of placing it among the lupoid affections. He mentions an interesting instance in which a post-mortem wart has persisted for nearly forty years. Although harmless in the majority of instances, there are cases on record, some of which are quoted by Ruhl and Paltauf in their exhaustive article in vol. xiii of *Vierteljahreschrift für Dermatologie und Syphilis*, in which systemic inoculation has resulted from the local sore.

Verneiul suggests, in this connection, that the phthisis with which Lænnec suffered might possibly be associated with the wound which he received many years before at a post-mortem on a phthisical subject. No doubt the reason why systemic infection is not more frequently observed is owing to the unfavorable soil which the skin offers for tubercular processes.

FOUR CASES OF PERITONITIS OCCURRING DURING GESTATION.

By A. D. Blackader, B.A., M.D.,
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(Read before the Medico-Chirurgical Society of Montreal.)

On the morning of April 21st, 1881, I was called suddenly to see Mrs. R., aged 32, a slight and delicate-looking woman, but with a good family history. She was in the sixth month of her third pregnancy, and had been seized suddenly with extreme abdominal pains. The following history was given: She had always enjoyed fair health, but suffered from a tendency to constipation, which at times was difficult to overcome. For this she had consulted me some weeks previously, and was ordered an ordinary pill of aloes and iron. On the evening preceding the

attack she had taken a double dose of these. During the night she had had to rise to attend to one of her children, and in doing so had crossed several times on her bare feet, and in a light dressing-gown, through a passage-way covered with oilcloth, and through which a cool breeze was blowing from a slightly open window. The pains came on suddenly about six hours afterwards. There had been no movement of the bowels. I found her sitting up in bed crying out with sharp lancinating pains. Her features were pale and somewhat pinched. There was slight distension of the abdomen, with great tenderness over all the lower half. The enlarged uterus could be easily felt, but it was difficult to determine whether it was especially the seat of pain, but there appeared to be no special contractions of it. The temperature was 104°; pulse 140, small and weak. On examination per vagina, the os was found soft and closed; little or no shortening of the neck seemed to me to have taken place. I gave her in pretty rapid succession four hypodermics containing each one-fourth of a grain morphia, applied hot cataplasms, and ordered an enema containing castor oil and turpentine. My morphine, though pushed during the day, failed to control the pains. Her pulse rapidly failed. That same evening Dr. MacCallum saw her in consultation with me, and confirmed my diagnosis of acute peritonitis, most probably idiopathic. By midnight her pulse was scarcely perceptible; suddenly it improved somewhat, her pains assumed a bearing-down character, and in about twenty minutes a six months fœtus was born dead. There was no uterine hemorrhage. Profuse vomiting of grumous matter set in, and she expired very shortly. Both her husband and her mother absolutely declined a post-mortem.

On the 23rd June, 1885, I was called to see Mrs. C., aged 28, advanced to between the fifth and sixth month in her fourth pregnancy. She was naturally of a strong constitution, but had been much depressed during past few months by severe family troubles. She did not admit any previous ailment. Two months previously, to ascertain whether she was pregnant or not, I had made a vaginal examination and detected no tenderness nor peri-uterine inflammation whatever. On my visit, complaint was

made of slight diarrhœa with abdominal pain, which she attributed to getting her feet wet a few days previously. The pulse was somewhat quickened; the temperature was normal. There had been no previous constipation. A simple anodyne was prescribed. I did not see her again for forty-eight hours. On my second visit the pulse was still quick, 108; temperature 99.8°, and complaint was still made of the pain. She was now confined to bed, a sinapism was ordered, and the amount of opiate increased. Some slight tenderness on pressure in the right lumbar region did not at the time give me much thought. Next morning at 5 A.M. I was hurriedly summoned and told she was much worse. I found her with a very anxious expression, considerable lividity of the face and lips, temperature 102.5°, pulse 120 (weak), and was told that the pain had been very sharp for the last two hours. Previously she had slept well. Tenderness was now marked over right lumbar region, but not so marked in the iliac region, and extended across the median line. Contractions were felt in the uterus, which was tender on right side. There was very slight distension of the abdomen. There had been no movement of the bowels for the past twenty-four hours. Vaginal examination proved that the os was still closed, but soft, and the cervix apparently shortened. There was no surrounding tenderness. I gave a full hypodermic of morphia and ordered ♏ x Battley's solution every three hours. Dr. Howard saw her with me at noon of the same day; the temperature and pulse had fallen, and the patient looked in every way better. He agreed in considering that the symptoms pointed to peritonitis, but did not consider them urgent. That evening she expressed herself as comfortable, and able to get a sleep; the tenderness seemed lessened, but at two o'clock labor pains set in, and before I could reach her the child was born. The mother was very pale, her lips were livid, and her pulse thready. There was little complaint of pain, and the mind was perfectly clear. The placenta had been retained, but there was very little hemorrhage. After waiting twenty minutes, and finding no effort at expulsion of the placenta, the assistance of Dr. Ross was obtained, and it was deemed advisable to deliver the placenta,

which Dr. Ross did by introducing his hand into the uterus. The amount of hemorrhage throughout was very slight. She never rallied, vomiting set in shortly, and she died the same evening at six o'clock. I endeavored to obtain a post-mortem, but the circumstances were particularly sad, and the father would not give his consent.

Mrs. S., aged 33, in her eighth pregnancy; previous confinements normal, with good recovery; after the last some retroversio uteri with descensus. Enjoyed good health till towards the end of the eighth month, when she caught cold and suffered from an attack of bronchitis, for which she was confined to her bed for a week. While recovering from this, acute parenchymatous glossitis set in, the pyrexia lasting three days, during which the temperature never exceeded 101°. On the fourth morning, at the time of my visit, the swelling had almost subsided, and she expressed herself as feeling comfortable again. That same afternoon I was sent for in great haste and found Mrs. S. with pinched features, feeble, quick pulse, a temperature of 103°, and considerable tenderness over the lower portion of the abdomen, especially in the left groin. No distension of the abdomen. Morphia was given hypodermically, and a mixture containing Battley's solution ordered. Dr. Ross saw her with me two hours afterwards; her condition was then much improved; she had snatches of sleep through the night. Another exacerbation set in at one o'clock on the following day; great pain was complained of on turning to either side, especially the left; the pain in the left hip was excruciating. That same evening the child was born alive, with comparatively little pain, but very rapidly, not half an hour elapsing from the first decided pain till the completion of the third stage. The strictest antiseptic precautions were used, and there was very slight hemorrhage. Although she expressed herself as comfortable after it was over, the pulse was quick (120) and there was slight pyrexia (100.4°). Dr. Ross saw her with me during the following two days, during which she seemed to hold her own fairly, but towards the evening of the second day her pulse began to fail; during the night hiccough set in. A consultation was held with Dr. Gardner

early next morning, and arrangements were at once made for abdominal section. By this time vomiting had set in. There was great distension of the abdomen, the pulse was very feeble (130), and there was decided lividity of the lips and extremities. The mind was clear. Death took place, unfortunately, during the administration of the ether, before the operation had been commenced.

Mrs. B., aged 24, consulted me about the end of October, '87, for frequent and painful micturition. She had been married about the middle of August, and the catamenia had not appeared since. As the symptoms did not yield to anodynes and moderate rest with alkalies, I made a vaginal examination, and found a decidedly anteverted, enlarged and somewhat fixed uterus lying against the bladder. As the symptoms were very distressing, and her general health suffered, I insisted on absolute rest in bed. By the end of December she was able to be up and about, and quickly regained her health and spirits. I did not see her again until the middle of February, when she consulted me in reference to obscure pains in right iliac fossa, with a steady ache in the back about the position of the sacro-iliac synchondrosis and occasionally about crest of ilium. There was a good deal of nausea, thickly furred tongue, and constipation, but a quiet pulse of 72, and no pyrexia. No tenderness on pressure was detected. I tried to relieve the constipation with salines and to correct the digestion, and was in part successful, but complaint continued to be made of the pain, though it was much alleviated. On March 2nd, about a fortnight after the commencement of the symptoms, the pain became suddenly much aggravated, apparently after an indiscretion in diet. There was much tenderness over the cæcum, slight distension, temperature 102° and pulse ranging about 100, slight nausea, but no vomiting. The patient was very restless and discouraged. Opiates were administered in full doses, and an enema was given daily, but the symptoms continued about the same. On the evening of the 5th Dr. Browne was called in in consultation. He agreed with me that I had a local peritonitis to deal with. At one time I thought a miscarriage was threatening, but it was apparently averted. On the evening of the 8th or 9th

the symptoms appeared so threatening that Dr. Gardner was also called in at Dr. Browne's request to discuss the question of abdominal section. At this time there was considerable distension, great tenderness all over the abdomen, principally in the right lumbar and left iliac regions, frequent vomiting, pulse weak (120–130), and temperature 101°. Two grains of morphia hypodermically, and two drachms of Battley's solution by the mouth, were given every twenty-four hours for some days to control the pain and permit rest. Turpentine enemata were given daily. Very gradually the symptoms subsided. On the 12th the parotid gland on the right side became inflamed. I feared lest it might be septic, but, fortunately, it terminated by resolution. As it was subsiding the left gland became inflamed and ran a similar course. By great care and keeping strictly to a recumbent position gestation went on to full term. On the 14th May, ten days before the date calculated on, I confined Mrs. B. of a healthy female child. Labor was in every respect normal, and convalescence was good. Though weak and very much reduced in weight, Mrs. B. was able to nurse her child, which seemed satisfied and appeared to thrive. After the third week, nursing was supplemented by artificial food thrice daily. There have been two attacks of abdominal tenderness since confinement—one in the end of June and the other two weeks later, characterized by pain in right iliac region, tenderness and slight pyrexia. At present both mother and child are doing well.

There is no reason to my mind why peritonitis should not occur during gestation, while there are reasons why it might even be of more frequent occurrence at that time than at other periods of life, but judging from the extremely small number of cases I can find reported, it must be of rare occurrence. No reference whatever is made to it in any of the works on obstetrics that I have been able to consult, nor, with the exception of the following four instances, can I find any report of similar cases in the medical journals of the past ten years. In the January number of the *Edinburgh Medical Journal*, W. J. Gow, M.B., of St. Bartholomew's Hospital, London, reported the following case as occurring in the lying-in charity of that hospital:

The patient, aged 32, a stout, well-made woman, had had eight children previously, in all of which the labors had been natural. She was seen for the first time on the morning of May 9th. She complained of frequent, sharp abdominal pains not resembling labor pains in character. Her lips and cheeks were livid, and beads of sweat stood on her brow. Her tongue was slightly moist. There was frequent retching. The hands and feet were cold and clammy, and the pulse was barely perceptible at the wrist and could not be counted. The respirations were rapid, being about forty to the minute. She was quite conscious, and complained of great pain on turning on to her left side. The abdomen was distended and the fœtus could be plainly felt appearing within the uterine cavity. Per vaginam, the cervix was soft, the os dilated to the size of a five shilling piece. The membranes were unruptured and the head was presenting. As there was constant desire to pass water, with inability to do so, the catheter was introduced and an ounce and a half of urine drawn off. The history given was that one month previously her right leg slipped through a hole in the floor; since then she had never felt well. She had reached nearly the full period of her gestation, and was expecting to be confined every day. She had remained in good health until the evening previous, when she was seized with sudden abdominal pain and vomited. She was visited by one of the students, who did not deem her seriously ill and prescribed some mild carminative. Seeing the desperate state of the patient, Mr. Gow decided to perform version and remove the child as rapidly as possible. The patient was placed on her back. A few whiffs of chloroform were administered tentatively, but it was discontinued on account of increased cyanosis. Just as the knee of the child was reached the patient died. In the hope of saving the child an incision was made into the abdomen. On opening the peritoneal cavity a large quantity of semi-opaque peritoneal fluid containing flakes of lymph escaped. The uterus was seen covered with flaky lymph. An incision was made into it and the child extracted five minutes after the death of the mother. All attempts at artificial respiration to restore the child failed. No blood was found either

in the uterine or peritoneal cavity. Inflammation of the peritoneum was most marked over the uterus and in its neighborhood. No cause for peritonitis could be found, but, unfortunately, no complete examination of the body was obtainable. Death took place fourteen hours after onset of symptoms.

Dr. Gow gives the following three additional cases as all he has been able to find reported: A birth is related by Sir J. Y. Simpson as not occurring in his own practice, but in that of a medical friend. The patient had arrived at full term of gestation. She seemed in good health till May 4th, when she had a rigor and complained of pain when moved. The pains recurred at intervals. At 5 A.M. on the 5th the physician was sent for, who found her fairly in labor—the os but little relaxed, but large enough for him to feel the breech presenting. As there seemed no special reason for waiting, he went away and returned at 9 A.M., when he found the patient had just died quite suddenly. On making a post-mortem examination, the abdomen was found filled with a quantity of serous fluid, in which some fibrinous flocculi were floating. The intestines were gummed together loosely with inflammatory deposits. The uterus was also covered with lymph. No local cause for the peritonitis could be discovered.

Dr. Matthews Duncan relates two other cases. One was that of a woman aged 34, unmarried, and arrived at about the end of the sixth month of pregnancy. She was supposed to have used drugs to produce abortion, but there was no evidence on this point. On the 10th January she was seized with great abdominal pain and tenderness. On the 12th Dr. Duncan saw her in consultation, and found her suffering from acute peritonitis, the large pregnant uterus being specially tender. On the 16th she unexpectedly miscarried, labor appearing to be very rapid. There was very little blood lost. On the 19th she died, two and a half days after delivery. The post-mortem showed universal peritonitis. The other case was that of a woman who died of enteritis, and on whom Cæsarian section was performed immediately after death. The full term of pregnancy was nearly reached. On making the post-mortem exam-

ination, the peritoneum was found covered with a thin layer of dense lymph.

In all of these, no exciting cause of the peritonitis was discovered. In one case, however, the purulent serum was found to be fœtid, looking as if there had been some connection with the bowel. The diagnosis in these cases will lie between peritonitis, concealed hemorrhage, rupture of the uterus, and, perhaps, rheumatism of the uterus. In my cases, I do not think there can be any doubt that my diagnosis of peritonitis was correct.

Retrospect Department.

QUARTERLY RETROSPECT OF SURGERY.

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Treatment of Empyema.—In an address on the surgical treatment of empyema (*Brit. Med. Journal*, Oct. 13th, 1888) Mr. Howard Marsh advocates early incision and drainage. The aspirator may in rare cases be successful, but its value is doubtful. He advises incision in the eighth or ninth intercostal space, immediately external to the inferior angle of the scapula. Chloroform should be given, and whilst administering it the patient should lie on the affected side, and over the side of the table, so that the action of the sound lung may not be impeded. The opening is best effected by making an incision through the skin and muscles of the intercostal space and then thrusting a director into the pleural cavity and stretching the track thus secured by dressing forceps. In adults, where the intercostal spaces are wide, resection of rib is not required, and occasionally in young children with wide spaces it may be avoided, but usually the intercostal spaces of children are so narrow that removal of a portion of the rib is required; the removal can be accomplished by means of bone forceps. The periosteum had better be removed with the rib. Hemorrhage usually gives but slight trouble. The chest cavity should not be washed out unless the pus is fœtid. The solution used for washing out may be a two or three per cent. of boroglyceride, 1 to 1000 of tincture of iodine and

water or boric acid. In cases of empyema operated on within a month, recovery is the rule. In chronic cases, suppuration continues after a free opening has been made, for the lung is bound down and cannot expand to fill the cavity from which the pus has been evacuated. In these cases Estlander's operation, consisting of the removal of portions of two or more ribs, should be performed. This operation is very useful, because it allows the chest wall to fall in and enables the surgeon to introduce his hand and break down any adhesions which may have formed. By this means pent-up pus may often be evacuated. Several successful cases are detailed.

At a meeting of the London Clinical Society on the 26th October, 1888 (*Lancet*, Nov. 3rd, '88), Dr. Handford reported a remarkable case of empyema complicated by loss of vision and bilateral softening of the cerebrum. Patient was a young woman aged 18. In March she was tapped and pus evacuated. In June the cavity was opened by an incision in the fifth interspace and post-axillary line and a quantity of pus evacuated. In August she complained of her eyes, and by September there was total blindness of right eye and then the left. A few days later she became hemiplegic, and died at the end of the month. No distinct abscess of brain found, but there was softening of the occipital lobes, the angular, temporo-sphenoidal, and part of the ascending frontal convolutions on the right side, and on the left side the supra-marginal convolution and the frontal lobe were involved. There was never any hemiopia in this case.

In the discussion which followed, Dr. Money said many cases of paralysis occurring during empyema had been recorded which were thought to be functional. He had made three post-mortem examinations in cases of the kind. In each of the three cases abscess of the brain was found. In two of the cases opened by him the brain symptoms did not occur until the rib had been excised. In two cases the brain abscess was on the same side as the empyema. Dr. de H. Hall reported a case where empyema had lasted two years, and when the rib was excised brain abscess terminated the case. One other case was also reported by Dr. Findlay. Dr. Handford, in reply, stated that in his case

the rib was not injured, but that free hemorrhage had taken place.

Injection of Sterilized Air in the Treatment of Pleuritic Effusion.—Prof. Potain, in a paper read before the Académie de Médecine of Paris, advocated a new method of treatment for pleuritc effusions. (*Bulletin de l'Académie de Médecine*, April, 1888.) He evacuates the fluid and then forces in sterilized air. In the first case, in which there was extensive tuberculous pleuritis, he evacuated two litres of sero-fibrinous fluid and pumped in sterilized air; the operation was twice repeated, and cure took place in less than three months. A double catheter was used, and whilst fluid flowed out of one catheter air was injected through the other. Prof. Potain's conclusions are as follows: (1) It is possible to replace completely by air the effusions of pleurisy, provided only sterilized air is used. (2) Air deprived of germs by filtration through cotton exerts no noxious effects and does not provoke decomposition of pleuritic effusions. (3) This procedure counteracts the serious dangers which result from the presence of large effusions in the pleural cavity or from their rapid withdrawal. (4) On the other hand, it enables us to avoid the serious drawbacks of repeated punctures and permits gradual and slow expansion of the lung. (5) Finally, it appears to favor cicatrization and even the definite cure of tubercular lesions by placing the lung in a condition of comparative rest.

Operative Treatment of Pulmonary Abscess.—Dr. Quincke of Kiel reports two cases of pulmonary abscess successfully treated during the past year (*Berliner Klin. Woch.*, No. 18, 1888). A year ago the same author reported two cases treated by operation (*Berlin. Klin. Woch.*, No. 19, 1887). Of the latter, the first had a chronic abscess in the lower lobe of the left lung apparently due to an acute pneumonia two years previously. The abscess was opened, the ribs being resected, and recovery took place with a permanent fistulous opening. Three years after the man was well, the lungs expanded symmetrically, and over the site of operation was a slight depression. The next patient treated in 1887 was a woman aged 26, and presented all the clinical signs of a large pulmonary abscess, including

expectoration of much fœtid pus. An attempt was made to set up adhesive pleuritis by the injection of iodine, but this failed, so the abscess was opened. Death took place in three weeks from purulent pleuritis. In the two cases treated during the past year complete success was obtained. The first was that of a man aged 32, who, after symptoms of an atypic pneumonia of a chronic character, suddenly expectorated a large quantity of fœtid pus, and the clinical signs left no doubt as to the existence of a pulmonary abscess, and not an empyema communicating with a bronchus. The eighth and ninth ribs were exposed on the right side by the use of chloride of zinc after a preliminary incision. Four or five centimetres were then resected, and next day chloride of zinc paste was applied to the bottom of the wound. After a week a capillary thread was introduced, allowing the escape of fœtid pus, and the canal thus formed was widened gradually by the thermo-cautery until a proper drainage tube could be passed and the pus evacuated. Within three weeks expectoration ceased altogether, and the man, who had improved daily during this time, convalesced steadily. Four months after the operation the patient had gained 45 lbs. in weight and left quite well The other case was not quite so typical. A woman aged 23 had an acute illness, the symptoms of which pointed either to abscess of the lungs or an empyema communicating with a bronchus. Exploratory puncture yielded no pus. Cavernous signs were at first absent, and the illness was too acute for bronchiectasis. The operative treatment was the same as the foregoing, and in six weeks patient was sent home cured. In this case the first incision was made in the ninth intercostal space, and chloride of zinc paste applied for eighteen days before the ninth rib was resected. The abscess in this case was never opened, but the pus was evacuated by means of a hollow needle.—(*Abstract of Editorial in British Medical Journal*, Sept. 22nd, 1888.)

Quincke's plan of opening these abscesses is very elaborate and tedious, but it is done with the object of setting up an adhesive pleuritis and so avoiding any danger of pus getting into the pleural cavity and setting up fatal purulent pleuritis. The

chloride of zinc paste accomplishes this in a safe and sure way. In the cases reported by Mr. Pridgin Teale, however, the danger of purulent pleuritis seems to have been avoided by free incision and drainage. Some of the cases reported by Mr. Teale are not true pulmonary abscesses, but first subdiaphragmatic or hepatic, discharging through the pleura into the lung. No doubt as our knowledge of lung surgery increases the procedures will be more simple than those advised by Dr. Quincke. Perhaps suturing the pulmonary to the costal pleura before opening the abscess, as recommended by Mr. Godlee, would be better.

Mr. Pridgin Teale, in an address on the *Surgical Treatment of Abscesses of the Lung and Empyema* before the late meeting of the British Medical Association (*Brit. Med. Journal*, Oct. 13, 1888), reported four cases of abscess of the base of the lung recently under his care which were treated by incision and drainage. Two recovered and two died. In two other cases in which abscess in the region of the diaphragm was suspected he explored with an aspirating needle under ether, but no pus was detected. Both cases died in a few days unrelieved. In one case the collection was thought to be in the pleural cavity, but was found in the lung; in another, it was thought to be in the base of the lung, but proved to be beneath the diaphragm, and the exploratory puncture with the trocar had gone through the pleural cavity and diaphragm before it reached the pus—the abscess was above the liver. Both these cases recovered. The two fatal cases are also interesting. In one, the trocar was thrust between the tenth and eleventh ribs and reached pus; an incision was made, and it was found that the abscess was surrounded by ragged liver; three and a half pints of pus were removed. Then a large opening was discovered in the diaphragm leading to the base of the pleural cavity. The cavity was drained, but febrile symptoms ensuing, another opening was made above the diaphragm, between the ninth and tenth ribs; the patient, however, died two weeks after the second operation. In the other case, offensive pus was found by incision between two of the lower ribs; no relief followed; post-mortem examination revealed abscess burrowing behind the liver and into the posterior

mediastinum. Two other cases are also mentioned in the practice of others where recovery took place.

Pulmonary Gangrene Treated by Incision.—At a meeting of the Clinical Society of London, held on the 12th of October, 1888, Dr. Pasteur read a paper on the above subject. The patient was a delicate-looking boy aged 7. His illness was insidious in the onset, but had rapidly developed. On the morning before admission to the Children's Hospital he coughed up a quantity of bright blood, and his mother noticed that his breath was offensive. Ten days after admission he was febrile, had a coated tongue, rapid breathing and gangrenous odor of breath. Over the right upper lobe were impaired, weak tubular breath sounds and diminished voice conduction. During the next three weeks cavity signs developed at the right apex and the remainder of the right lung became pneumonic; the temperature ranged between 100° to 103°. He spat up daily two to four ounces of offensive watery fluid, mostly saliva. Mr. Pollard subsequently operated on the boy. The cavity was incised at the anterior extremity of the right second space one inch from the sternum. Large quantities of gangrenous lung and putrid fluid were expelled through the wound. The cavity reached down to the sixth rib. A counter opening was made in the sixth space and flanged tubes inserted. The cavity was washed out daily once or twice. All went well for a week, when the temperature and pulse rose, the fœtor of breath reappeared, and the patient sank three days later. A huge cavity occupied the anterior third of right lung. At the inner part the necrotic process had involved the pericardium and set up pericarditis. The œsophagus was firmly adherent to the right bronchus, and a narrow sinus about three-quarters of an inch long connected the two tubes. No tubercle or caseous suppurating glands. The gangrene was no doubt due to the passage from the œsophagus to the bronchus of some foreign body, probably irritating food material. An earlier operation might have saved the patient.

In the discussion which followed, Mr. Rickman Godlee mentioned a case of gangrenous cavity of the apex of the lung which was opened and drained. The pleura was not adherent, neces-

sitating the securing of the pulmonary to the costal pleura before the abscess was opened. The child died in two days, and then it was found that another gangrenous cavity existed in the apex of the other lung.

Dangers of Resection of the Ribs.—At the late meeting of the French Surgical Cangress M. Berger reported two cases of sudden death following resection of the ribs. In patients debilitated by age or long suppuration, or in whom the whole extent of the pleural cavity was involved, he advised that (1) the ninth and tenth ribs be left intact in order to interfere as little as possible with the respiratory movements, and (2) that only a few ribs be resected at a time, thus obtaining a gradual closure of the suppurating cavity. M. Bouilly said he had performed the operation thirteen times, and the best results had been obtained in persons between the ages of 18 and 21, in whom the chest walls were more flexible and accommodated themselves more readily to their new position. M. Ollier advised that in the child only a narrow section of the bony wall be removed, but in the adult an extensive operation was demanded on account of the inelasticity of the chest walls.

Trephining the Gladiolus for Pus in the Anterior Mediastinum.—Mr. Ballance (*Lancet*, Nov. 3rd, 1888) reports a case of a lady, aged 35, who was admitted into the St. Thomas' Home for surgical treatment. She complained of a discharging abscess of the front of her chest, accompanied by constant and severe pain and great tenderness along the breast bone, also fever, anorexia, and loss of sleep. Two years ago, after the birth of her last child, she had a severe illness, and was in bed for more than three months with so-called inflammation of the lungs. Since then she has never been quite well. Three months before admission a lump about two inches in diameter formed over the upper part and left side of the sternum; an incision was made and pus evacuated, but a sinus remained. The sternum was here acutely tender and painful. After entrance into hospital another swelling formed over the fourth, fifth and sixth costal cartilages. The patient had rigors and high temperature, so it was determined to trephine the sternum, which was done by two

openings, one opposite the second intercostal space and the other opposite the fourth ; the intermediate bone was removed and the anterior mediastinum opened and found to be full of creamy pus. The abscess was washed out, and the remaining part of the sternum, which was carious, scraped with Volkmann's spoon. The patient made a rapid and complete recovery, the sternal opening becoming filled up with fibrous tissue. Mr. Ballance concludes his paper with a reference to other published cases of mediastinal abscess, mentioning the cases of Dr. Cooper of San Francisco and Dr. Hanks of Chicago, each of whom trephined the sternum, one to remove a piece of iron and the other a bullet.

Perineal Lithotrity.—At the recent Washington Congress, in the section of Genito-Urinary Surgery, Mr. Reginald Harrison read a paper on the above subject. After giving a history of the operation he related four cases in which he had practised it with some modifications of his own. In three cases the prostate was large, and he was desirous of draining the bladder after the stone had been removed. In the fourth case the stone was very large. The external incision is made as for lateral lithotomy, deep into the membranous portions of the urethra as for exploration of the bladder ; a pair of straight, crushing forceps is introduced, the stone broken up, and the fragments removed. When the bladder was free, it is washed out with a sublimate solution and a large drainage-tube inserted ; the tube is kept in for three or four days. Mr. Harrison's forceps consist of a strong pair of ordinary bladder forceps with a cutting rib down the centre. They are sufficiently strong to break any stone that can be grasped ; they are, in fact, constructed on the same principle as the blades of a lithotrite. By means of these forceps used through the perineal incision a large calculus can be broken down in a few minutes, a process which could not be accomplished under half an hour by the ordinary lithotrite and water evacuation.

Treatment of Urethral Stricture by Electrolysis.—This method of treating urethral stricture has been much recommended by some surgeons, especially by Dr. Newman of New York and Mr. Hurry Fenwick of London. At the recent meeting in

Washington Dr. E. L. Keyes of New York read a paper (*New York Medical Journal*, Oct. 6th, 1888) in which he narrates his experience. After an extended and faithful trial of electrolysis for stricture he has come to the conclusion that as means of treatment for stricture it is absolutely useless. He said that it is a common belief (1) that anyone by following rules may use the method successfully; (2) that electricity does no harm to the urethra; (3) that stricture cured by electricity is dissipated by absorption, and that the urethra remains permanently open. Dr. Keyes says there is no foundation for these beliefs. Every case treated by him was a failure. In one of the cases Dr. Newman himself applied the electricity. In conclusion, Dr. Keyes says: "I may state that electrolysis with a very mild current does no harm; in fact does nothing that I can appreciate and does not interfere with the benefit to be derived from gradual dilatation. I believe the strong current is full of danger both immediately from irritating effect and ultimately from cicatricial effect; and that employment of negative pole does not prevent this. [My study of the subject and the experience it has brought me, digested with all the impartiality I possess, lead me to state that the allegation that electricity, however employed, is able to remove organic urethral stricture radically lacks the requirement of demonstration. The confidence of its advocates that it will radically cure organic fibrous stricture is, in my opinion, due either to continued credulity of the patient and the imagination of the surgeon, or to some special, but fortuitous, act of Providence, upon the co-operation of which, in the case of his own patients, the general practitioner cannot with any confidence rely."

This certainly is very strong adverse testimony from a very able genito-urinary surgeon and a very acute observer. The rage for electricity, like every other rage which has disturbed the even tenor of medical science, will soon die out. Like every new remedy (or old remedy newly applied), it is said to cure everything from a uterine fibroid to a pain in the big toe, and indiscreet advocates herald its supposed victories with marked absence of modesty. Series of cases a few weeks old are re-

ported as permanent cures; others reading the wonders this new remedy accomplishes, provide themselves with enough electrical apparatus to start a telephone company, and having this expensive and garish outfit, use it indiscriminately in every case. The poor patient not only suffers in pocket but in health, still she is delighted to have a fuss made over her, and thinks the doctor is doing wonders. The cases (outside of certain nervous ones) cured by electricity appear to me to be those which furnish brilliant results to faith curers, Christian scientists, and "others of that ilk." No doubt many cases of stricture which can only be detected by means of a No. 25 or 30 sound are benefited by this novel and impressive form of treatment. Like many another much-vaunted remedy when tested in a calm, impartial and scientific manner, a great deal of its glory will pass away, and its true uses and place will be found.

Internal Urethrotomy—Value of Antiseptics.—Mr. Bruce Clarke (*Lancet*, Oct. 13th, 1888) is of opinion that nearly all the febrile attacks which occur after internal urethrotomy are preventible by taking proper precautions. (1) The urethra is rendered as pure as possible by previous irrigation and for several days beforehand both with hot water and corrosive sublimate (1–2000). If the kidneys are diseased or the urine foul then, perhaps, external urethrotomy is the preferable and safer operation. (2) The instrument to be employed should be taken to pieces and carefully scrubbed in soda and water and soaked in carbolic acid (1–20) for at least ten minutes before operation, and only put together the last moment before it is used. (3) When the urethra has been freely divided, a full-sized catheter should be passed into the bladder and retained there for twenty-four hours. The advantages of retaining the catheter are several. The wound is protected from contact with the urine, the tendency to hemorrhage is checked, and the lips of the wound are kept open, thus preventing union by first intention. Great care should be taken that the catheter is aseptic. Mr. Bruce Clarke has treated fifteen cases in this way with the most satisfactory results. Several cases are reported in detail.

Treatment of Enlarged Prostate by Galvano-Puncture.—Biedert (*Deutsche Med. Woch.*, No. 21, 1888) advocates this method. He punctures the prostate through the rectum with a platinum needle, which is isolated up to 1½ centimetres from the tip. The prostate is punctured deeply in two or three places to the depth of 1½ cm. (three-quarters of an inch) and the current turned on for two to three minutes. The needle is attached to the negative pole of a battery of from 12 to 18 elements. If the needle is attached to the anode, cauterization will result and be followed by troublesome abscesses.

Treatment of Piles by Injection.—This method of treating piles was long a secret one, and although it has in the hands of some surgeons proved successful, in many cases failure has resulted. Its chief recommendation to the laity is the fact that the much dreaded knife is done away with. Mr. T. Swinford Edwards states (*Brit. Med. Jour.*, Oct. 13, 1888) that he has tried this method in 38 cases and has been agreeably surprised at its results. There has been only one relapse, three cases have remained well for two years, and fourteen others from two years to six months. In nine other cases sufficient time has not elapsed to discharge them as cured. Mr. Edwards uses the following formula for the injecting fluid: Acid carbol., gr. xii; glycerine and water each one drachm, that is, one in ten. He has occasionally, in severe cases, doubled the strength. If the piles are not down an enema should be given. The patient should be placed on a couch on his hands and knees. With a hypodermic syringe into each pile is injected two to five minims of this pre-preparation; the injection should be performed slowly. The piles are then oiled and returned, and the patient allowed to depart. Mr. Edwards says that there are certain things in regard to this treatment it is well to bear in mind. First make a thorough examination of the rectum to see that no other disease coexists, as, for instance, polypus, fissure, fistula, stricture. Before operating, see that the bowel is empty and the piles are well protruded. If the patient is unable to protrude them with the help of an enema, it is hardly worth while to practice this mode of treatment, and he does not advise injection of the piles

through a speculum as recommended by some practitioners. The piles should be returned immediately after operation, and if they come down subsequently should be immediately returned. The advantages of the method are that the patient is not laid up, suffers no pain, and runs no risk from hemorrhage, tetanus, erysipelas, or pyæmia.

Dr. Kelsey of New York, who has used this method extensively, now says that it ought only to be employed in selected cases.

Treatment of Ununited Fracture of theHead of the Femur.—According to a recent number of the *British Medical Journal*, Prof. Loreta has successfully treated an ununited intra-capsular fracture of the neck of the femur by scraping the fractured surfaces and inserting a bundle of eight to twelve metallic sutures between them and brought out at the lower extremity of the external wound. The metallic sutures were left in five days and then removed. The patient was a man aged 36, who had broken his hip nineteen months previously. The joint was exposed by a long incision behind the great trochanter. In fifty-five days after the operation the patient left hospital, being able to walk with no further support than the attendant's hand.

Disinfection of Surgical Instruments and Dressings.—Dr. Renard states that the disinfection of instruments by a five per cent. solution of carbolic acid is unreliable, the germs withstanding a soaking of from 30 to 45 minutes. Bichloride is reliable, but has a chemical action on the instruments. Heating in the flame of a spirit lamp is efficient. Boiling at 212°F. is efficacious if long continued. Steam at 230°F. destroys all germs if the substance be submitted to it for thirty minutes. Renard has a copper cylinder boiler that he fills about an eighth full of water; baskets containing instruments, and provided with feet that raise them from the surface of the water, are put in the cylinder; a lid containing a manometer and a safety-valve is screwed in place, and by means of an alcohol lamp the water is boiled; the air in the cylinder passes off by a stop-cock in the lid, which is then closed and the pressure is increased until it represents a temperature of 230°F. Absolute disinfection is obtained in

half an hour.—(*Quoted in Boston Med. and Surg. Journal*, Sept. 20th, 1888.)

Treatment of Erysipelas.—Nussbaum applies an ointment of equal parts of lanolin and icthyol and then envelops the parts in salicylated cotton. Next day it will be found that the erysipelas has not only not advanced, but that there has been a notable amelioration of all the morbid symptoms. The swelling, redness and pain has diminished. It is, according to the author, seldom necessary to continue the application for more than three days. —(*Allgemeines Weiner Med. Zeit.*, 1888.)

Surgery of the Brain.—Drs. Seguin and Weir, in an elaborate article on the diagnosis and treatment of tumors of the cerebrum (*Amer. Jour. of the Medical Sciences*, July, August and September, 1888), discuss the present state of the surgery of the brain from both a neurological and surgical standpoint. Dr. Seguin is of opinion that the diagnosis of a case of supposed tumor of the brain should, before operation is attempted, be carefully worked out on the following five lines of inquiry: (1) The diagnosis of the tumor within the skull, and more especially in or upon the cerebral hemispheres. (2) The diagnosis of the exact location of the tumor. (3) The diagnosis of the depth of the tumor; whether it be cortical or subcortical. (4) The diagnosis of solitude or multiplicity of the tumor. (5) The diagnosis of its nature. After discussing these points very fully he states that "the surgeon must be content to have the physician furnish him with a reasonably exact diagnosis of the location of the tumor and with a probability diagnosis of its solitude." A case of removal of a subcortical sarcoma lying below the edge of the second frontal and the anterior edge of the præcentral gyri is described. A German, aged 39, had suffered for two years from epileptiform convulsions, and for several years before had spasmodic twitchings. The patient suffered, while under observation, from right-sided Jacksonian epilepsy, with facio-brachial paralysis, which pointed to a tumor, probably sarcomatous and subcortical, of the left motor zone in the facial centre. Dr. Weir removed a portion of the skull, 3 by 2 inches, and exposed the brain in this region. The membranes being opened,

the brain was seen to bulge decidedly into the opening; firm pressure at the posterior part of the opening encountered a deep resistance of a hard mass. It was readily enucleated with the aid of a Volkmann's spoon. The patient made a good recovery, being allowed to go home after a month in good general condition. He still had, however, occasional twitchings, some headache, and slight paresis of right lips and cheek.

Dr. Weir, in the September number of the *American Journal of the Medical Sciences*, discusses the surgical procedures necessary in the proper removal of brain tumors. He advises a curved flap both of the scalp and dura mater, as this secures after protection of the brain. Hemorrhage from the large scalp incision may be controlled to a considerable extent by encircling the head tightly in a line with the occipital protuberance with a rubber band, as suggested by Dr. M. A. Starr. The careful outlining of the region to be explored in the shaven scalp is of no avail after this has been lifted away, and the plan suggested in his recent cases of indicating the site of the trephine centre on the bone itself answers very well. The cranial opening should be a large one. Weir uses a one-inch trephine, Horsley a two-inch. The intervening line can be quickly cut away with a rongeur forceps or a dental or electrical bone cutter. The dura mater should also be freely opened, and the exploring needle is not recommended, as he has known fatal hemorrhage follow its use; diagnosis of a subcortical tumor can generally be made by palpation with the finger of the bared convolutions; the finger may be insinuated under the long edge of the opening to a short distance with safety. Important vessels, such as the longitudinal or lateral sinuses, after the removal of the superjacent skull, can be lifted from their places and drawn aside without risk by pulling upon the dural flap. The closure of the opening in the skull is best accomplished by the replacing of the trephine buttons in cloths wrung out of 1–60 carbolic lotion and kept warm during the operation by immersing the vessels containing them in warm water. Hemorrhage from the bone can be controlled by pressure, plugging, or, better still, by crushing the edges of the opening with blunt forceps. Bleeding from

dural vessels may be checked by catching them up with a tenaculum and applying a ligature; vessels of the pia mater are easily torn, and bleeding is best checked by securing them with a tenaculum and applying a ligature with equal traction of its ends. All hemorrhage being checked, a small perforated rubber drainage-tube should be inserted, to be removed the second or third day as the case demands. The dural flap is then stitched with fine catgut; the bone fragments should be now replaced with a few shoots of horse hair inserted among them, to emerge with the drainage-tube. The scalp flap is returned and sutured; over all a sublimate dressing should be applied, with iodoform dusted over the layer resting on the wound. After operation it is better to keep the head elevated.

The remarkable address of Dr. Wm. Macewen at the recent meeting of the British Medical Association in Glasgow has already been alluded to in my address on *Recent Advances in Surgery* published in the Nov. number of the JOURNAL. Space will not permit to quote very fully from an address which has already been so widely published (*Lancet* and *Brit. Med. Jour.*, Aug. 11th, 1888). He reports twenty-one cerebral cases (exclusive of fractures of the skull or other immediate effects of injury) in which operations had been performed by him, in which number there were three deaths and eighteen recoveries. Of those who died all were *in extremis* when operated on; two were for abscess of the brain, in one of which pus had already burst into the lateral ventricles, in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which, besides a subdural cyst over over one of the hemispheres, there was extensive softening at the seat of the cerebral contusion in the opposite hemisphere, accompanied by œdema of the brain. Of the eighteen who recovered sixteen are still alive in good health, and most are at work, leaving two, who have since died, one eight years after the operation from Bright's disease, the other forty-seven days after operation from tubercular enteritis. Noting the fact that the removal of large pieces of the motor area produces permanent hemiplegia of the innervated side, Dr. Macewen recom-

mends caution and exercise of judgment in operating on the brain. Each case should be studied on its merits, and surgeons who attempt these operations need not only experience in general surgery but an accurate knowledge of motor and sensory phenomena in connection with the localization of the functions of the brain. He calls attention to the anchoring of the brain to the membranes and the membranes to the skull apt to be caused by plastic effusion and cicatricial formation. The free play of the brain within its water-bed is thus impeded, and every movement causes pulling at this point, with consequent vertigo and subsequent fits, and still later encephalitis. He says that hernia cerebri after operation is always due to decomposition, and that it may be avoided by aseptic measures. False hernia cerebri is identical with red softening of the brain occurring in idiopathic affections without operation, and consequently in these cases hernia would not be obviated by sepsis. In speaking of the note elicited by percussion of the skull as an aid to diagnosis of the consistence of intra-cranial contents, he says when the skull is intact and the ventricles distended with fluid such as may arise in consequence of tumor in the cerebellum exercising pressure on the fourth ventricle, the percussion note elicited affords indications of the altered consistence of the intracranial contents. Dr. Macewen thinks this will be of the utmost value in early life in the diagnosis of tumors of the cerebellum.

At the recent meeting of the American Physicians and Surgeons in Washington Dr. Wm. Keen of Philadelphia exhibited three cases of brain surgery in which he had successfully operated (see *Amer. Journal of the Medical Sciences*, Oct. 1888). The first was a case of removal of a large tumor in the cerebrum, probably arising from an injury at three years of age, in which there was epilepsy and hemiplegia at 23. His age was 27 when the tumor was removed. The patient made a good recovery, and has since been free from his epilepsy. The tumor weighed nearly four ounces and measured 3 by 2½ inches. The second case case was that of a man aged 25, and was one of simple depressed fracture of the skull followed in four months by epilepsy; thirteen months later the skull was trephined and the

damaged bone tissue removed. The patient recovered in seven days and was cured of his epilepsy. The third case was one in which the cerebral motor centre for the left wrist and hand had been removed for epilepsy with recovery.

Trephining the Spine for the Relief of Paraplegia.—This operation has been performed many times during the present century for the relief of paralysis following injury. Ashurst has collected 43 cases of such operations, but trephining for the pressure paralysis of spinal caries has not often been performed. Dr. Macewen, in his late epoch-making address at the British Medical Association meeting in Glasgow, stated that he had operated on no less than six cases. In all, the posterior arches of the vertebræ were removed, four to relieve paraplegia caused by pressure from connective tissue neoplasms and displacements of the vertebræ due to caries and traumatism. Out of the six cases operated on four were successful and two died. The first case was operated on as early as 1882; this was one of paraplegia with incontinence of urine and fæces due to connective tissue tumor at the seat of an angular curvature of spine. The patient was nine years of age, had suffered from complete motor and sensory paraplegia with incontinence of urine and fæces for two years. For three years he had had angular curvature of the spine, most marked between the fifth and seventh dorsal vertebræ. The patient had been treated by extension and plaster jackets. His case being apparently hopeless, operation was decided on. The laminæ of the fifth, sixth and seventh dorsal vertebræ were removed. There was no pulsation in the portion of the cord exposed. Between the thecæ and the bone there was found a fibrous neoplasm of an eighth of an inch in thickness which was firmly attached to the thecæ and covered about two-thirds of its circumference. This was carefully dissected off. The cord was then able to expand backwards, and its pulsations, which up to this period were absent, began to show themselves, especially opposite the fifth dorsal. Twenty-four hours after the removal of the pressure the limbs had lost their livid color, were distinctly warmer, the spastic rigidity had greatly lessened, the sense of tickling the soles had returned, and touch had improved.

Eight days later return of movement was observed. Soon he regained perfect control of his sphincters. Six months subsequently he was able to go about without support. Five years afterward he walked three miles to pay Dr. Macewen a visit, and now he is attending school, joins in all games, including foot-ball, and feels strong.

A second but more aggravated case is also related. The patient was a girl and the symptoms indicated changes in the cord itself, which rendered the operation almost hopeless. Operation was only performed at the urgent request of the girl herself. The spine was cut down upon and a dense connective tissue tumor was found between the bone and the thecæ, which was so firmly adherent to both that in some places the thecæ was elevated along with the neoplasm. The portion of the cord exposed was shrunken to half its dimensions and lay like an inanimate rod. The elevation of a sufficient number of laminæ to expose a portion of the cord which pulsated was followed by pulsation of this rod, but there was no distensile pulsation. From the appearances presented at the operation it was considered that there was no hope for her recovering from her paraplegia. However, ten hours after the operation the limbs had lost their lividity and felt warmer to the touch. Four days after operation she had continence of urine and fæces; sensation quickly returned, motion very slowly. In six months she could move her limbs freely, and in eight months she walked a quarter of a mile. Since then she has been well and been able to attend to light house duties.

A third case was also successful, but two others have not been so. One succumbed a month after operation, and the other some months later to an attack of general tuberculosis. In both these cases the temperature was high prior to operation, and subject to exacerbation. Since this experience Dr. Macewen has deemed no case fit for operation in which the temperature did not run an even, regular and continuously normal course.

Another case of paraplegia due to traumatism is also reported. Operation was performed, resulting in the finding of a connective tissue tumor, which was removed. The patient some time after

was able to walk about with support, and a year after he walked about with ease without support, but with a paraplegic gait.

Mr. Victor Horsley's case of successful removal of a spinal tumor causing paraplegia has already been alluded to in the Retrospect. In the *Lancet* of July 14th, 1888, Mr. J. H. Thompson reports a case of trephining for the relief of Potts' paraplegia. A boy aged 7 was admitted into the Manchester Hospital for Sick Children suffering from angular curvature of the spine involving the mid-dorsal region. There was paresis of the lower limbs, with apparent psoas contraction and wasting of the muscles of right side. In spite of the usual treatment by rest, cauterization, etc., the condition grew worse until complete paralysis of both lower extremities with incontinence of urine and fæces ensued. It was then decided to open the spinal canal and relieve pressure. Mr. G. A. Wright performed the operation. An incision about four inches in length was made along the lines of the most prominent spinous processes and the soft parts on each side separated so as to expose the osseous surfaces. Three laminæ were divided on each side and were removed with their attached spines, uncovering the theca of the spinal cord, which at the lower exposed part was found surrounded by a buff-colored, tough, leathery substance; this was cut away with scissors. No point of constriction could be found. The wound was closed and a drainage tube left in. There was temporary improvement evidenced by pin-pricks being felt in the left foot and power of flexion of both thighs, but this soon was lost, and patient relapsed into his former condition. Two months after operation the child was as bad as ever.

Mr. Wm. Thorburn reports a case (*Brit. Med. Jour.*, Sept. 22nd, 1888) which occurred when he was house surgeon in the Clinical Hospital at Manchester in 1885, under the care of Dr. Maccall. A boy aged 6 years had a history of being previously well, when he began to complain of pain in his chest. On the 5th of March he went to bed as usual, and on awaking next morning he was paralyzed. Examination revealed marked prominence of the third and fourth dorsal vertebræ, with absolute paralysis of sensation and motion below the third and fourth

dorsal nerves. The boy rapidly became worse, and had a temperature of 104.8°. As he was evidently sinking it was decided to trephine over the prominent spines; this was done, and on the cord exposed some pus was evacuated and the child breathed more freely for a time, but next day the boy died asphyxiated. No post-mortem was held.

These cases are interesting, and although the two latter did not terminate favorably, yet with Dr. Macewen's experience we should feel encouraged, and hope that in the future permanent relief may be offered in those cases where the paraplegia is unaccompanied by elevation of temperature. In Dr. Macewen's second case we see how a patient in an apparently hopeless condition recovered sufficiently to go about and attend to her household duties. Certainly Dr. Macewen's marvellous results will lead surgeons to alter their former opinions regarding operation in cases of paraplegia due to curvature from spinal caries. It seems remarkable that the wonderful results obtained by Dr. Macewen, although published in 1885 in the *Glasgow Medical Journal* and the *British Medical Journal*, have hitherto attracted but little attention.

Relapsing Typhlitis Treated by Operation.—Mr. Treves (*Lancet*, Feb. 18th, 1888) says that in the majority of cases of so-called typhlitis the appendix is the cause of the disease, and the perityphlitic abscess is more usually an encysted peritonitis due to perforation of this process than to disease of the cæcum. The appendix may become the starting point of inflammation by reason of congenital deformities, of changes that take place in its mesentery, producing bending, of the lodgement of foreign bodies and concretions that are encouraged to remain unmoved on account of the feeble muscular coats of the tube. The source of manifold disturbance can be destroyed by removal of the appendix or by correcting any little deformity of which it is the seat. The statistics of Fitz show that in 11 per cent. of the examples of this affection the patients were the subjects of successive attacks. In one case quoted, five attacks occurred in eighteen months. A case of relapsing typhlitis in a man aged 34 was reported by Mr. Treves, in which, between the attacks, the

appendix was cut down upon, found diseased, and removed. The patient made a good recovery and remains free from further relapses.

Inflation of the Stomach with Hydrogen Gas in the diagnosis of Wounds and Perforations of this Organ.—Dr. Nicholas Senn (*Medical News*, Aug. 25th, 1888) reports a case of wound of the stomach detected by means of the inflation of hydrogen gas. The patient was a man aged 72, who was brought to the Milwaukee Hospital suffering from suicidal pistol wound of the chest. The wound was situated in the sixth intercostal space, and the seventh rib, at its junction with the costal cartilage, was fractured. Blood vomited and expectorated. No hæmo- or pneumothorax. A flexible tube was introduced into the stomach and hydrogen gas forced in. Gas escaped and ignited at the wound of entrance. Laparotomy was performed and the stomach and omentum drawn into the wound. A large perforation was found in the stomach midway between the cardiac and pyloric end on the greater curvature, and another was detected in the lesser curve. The wounds were closed with Czerny-Lembert's suture with great difficulty. Blood in considerable quantity was found behind the stomach. The patient's condition now became serious, and he died before the abdominal wound could be closed. After death the abdominal wound was sutured and inflation of hydrogen gas per rectum made to test the condition of the sutured stomach. A stomach tube was introduced and the gas under pressure of not more than a pound forced through the entire gastro-intestinal canal, igniting and burning with a considerable flame as it escaped from the end of the stomach tube, which showed that no gas escaped through the sutured wounds. At the post-mortem examination both pleural cavities were found obliterated by old adhesions, which accounted for the absence of hæmo-thorax; the diaphragm was perforated and lower lobe of left lung; tail of pancreas lacerated; the bullet then passed through the left crus of diaphragm, fractured the last rib, and perforated the spinal column, opening the spinal canal. The bullet was found under the skin in the right lumbar region. Dr. Senn says he has been able to make a correct diagnosis in several cases of

obscure abdominal tumors by resorting to rectal and stomach inflation with hydrogen gas, which otherwise would have needed an exploratory laparotomy. The relation of tumors to the different organs can be mapped out and studied with great accuracy by dilating the stomach and different portions of the intestinal canal at intervals with hydrogen gas.

Curative Action of Erysipelas on Tumors.—Prof. Bruns (*Beitrage zur Klin Chir.*, Bd. III, Hft. 3) reports a case of cure after erysipelas of a recurrent melanotic sarcoma of the breast. He has collected 22 cases. In five cases of sarcoma, three were completely and permanently cured (Busch, Biedert and Bruns), the remainder were diminished in size, but soon increased again. The same result followed six cases, in which the diagnosis of carcinoma or sarcoma was not definitely made, and also in three cases of epithelioma. Two cases of scar keloid and one of lymphoma were completely cured after erysipelas. These cases caused the recommendation of erysipelas as a curative measure in cases of malignant tumors which could not be operated on. Fehleisen impregnated with his erysipelas culture five patients, with the result of partial cure. Janicke (1884) reported a case of cure in mammary sarcoma. The curative action of erysipelas is not only confined to malignant tumors, but is serviceable also in chronic skin diseases, ulcers, lues, etc. On the other hand, tumors have been spontaneously cured after other febrile affections, as typhus, pyæmia, etc.; and Bruns says that fact proves that the disappearance of the tumor is caused by fat metamorphosis of the cell elements and absorption of the same through the fever, and is not due to invasion of cocci, for tumors have disappeared where the erysipelas had not spread to the region of the tumor. The scientific employment of erysipelas for the purpose of removal of tumors should be placed on a proper basis. Unfortunately, hitherto we have had no sure means whereby erysipelas may be inoculated. Two cases (Bruns and Biedert), in spite of repeated inoculations, resisted the influence of erysipelas.—(*Quoted in Centralblatt f. Chirurgie*, No. 34, 1888.)

Dr. L. Feilchenfeld, in an article (*Archiv für Klin. Chir.*,

Bd. xxvii, Hft. 4) on the inoculation of erysipelas in cases of breast cancers unfit for operation, reports such a case which had been lately under his care, and where the inoculation of erysipelas proved rapidly fatal. The patient was a strong, healthy woman, aged 47, who had cancer of the breast with involvement of the axillary and cervical glands. He is of opinion that surgeons will hesitate to employ such a dangerous remedy for the cure even of cases of cancer in which operation is out of the question, until the intensity of the poison has been so modified by culture as to produce a merely local action. The culture with which he inoculated his patient was supplied by Dr. Fehleisen, who himself performed the inoculation in two spots over the deltoid and two on the breast scar.

Reviews and Notices of Books.

The Medical News Visiting List, 1889. Philadelphia, Lea Brothers & Co.

In addition to the ordinary diary for the recording of visits and consultations, this List contains a very useful account of certain subjects, a knowledge of which is necssary in cases of emergency. We have a list of poisons with their antidotes; an illustrated description of Sylvester's method of performing artificial respiration; a description of the more improved methods of disinfecting clothes, rooms, etc., etc.; an account of the chemical examination of the urine; a list of recently introduced drugs; a very full posological and therapeutical table, as well as many other matters of importance. The List is beautifully finished.

The Physician's Visiting List for 1889. Philadelphia, P. Blakiston, Son & Co.

This is the thirty-eighth year of publication of this favorite List. Every year additions and improvements are made. In addition to the ordinary features of lists in general, we have full descriptions of how to carry out Marshall Hall aud Sylvester's methods of performing artificial respiration; posological and therapeutic tables; a list of poisons and their antidotes; a list of incompatibles; a description of the more important urinary tests, &c.

Society Proceedings.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

First Triennial Session, held at Washington, Sept. 18, 19 *and* 20.

(Continued from page 305.)

Dr. Charles K. Mills of Philadelphia opened the discussion on *Cerebral Localization in its Practical Relations*. He began by referring to the fact that from the clinical observation of practical physicians sprang the conceptions out of which developed the science and art of cerebral localization. Allusion was made to the discoveries of Bouillaud and of Broca on speech localization; to the announcement by J. Hughlings Jackson in 1864, that certain convolutions superintended the delicate movements of the hand which were under the immediate control of the mind, and to Hitzig's researches having originated from his observing certain ocular movements during galvanization of the heads of his patients. Brief reference was made to the history of American work in localization; to the investigation in 1874 of the New York Society of Neurology and Electrology; to Putnam's discovery that irritation of the white matter beneath the definite cortical centres produced movements similar to those caused by irritation of the centres themselves; to the labors of Wood and Ott on the heat centres, and to the light thrown by these investigators upon the mechanism of fever, and the action of drugs upon different forms of high temperature. Before taking up the surgical aspects of the question, he briefly discussed some of the practical results wrought by cerebral localization for psychological medicine and medical jurisprudence; for general symptomatology and diagnosis, and for medical therapeutics and technique. Trephining for cases of insanity, particularly when guided by the rules of localization, was briefly considered. Two of the recent cases of brain operation, reported by Bennett and Gould and by Macewen, were cited as possibly opening a new field for surgical interference in insanity, the excision of cortical areas as a method of treatment when certain subjective phenomena, such as hallucinations of sight or

hearing, can be given a local habitation in the brain. In turning to the surgical aspect of cerebral localization in its practical relations, Dr. Mills stated that his remarks would be chiefly concerned with questions of diagnosis. He considered, first, the forms of disease and injury in which cerebral localization is a valuable aid to diagnosis; and, secondly, the topographical diagnosis of the parts of the brain accessible to surgical interference, with some sources of error in such diagnosis. The forms of disease in which such diagnosis has been used are intracranial tumors, cysts, fractures, hemorrhages, abscesses, and discharging cortical areas.

In considering the localization of brain tumors, Dr. Mills referred to twenty cases of autopsies occurring in his own personal experience, in about one-half of which the tumors were in surgically accessible areas, and in at least one-fourth of which successful operations might have been performed. He advocated, from experience, the excision of old gummata, and also, in special cases, of tubercular growths. The value of localization was shown in cases of fracture in which the extent of the unseen damage could not be told by the position and character of the visible lesions. Of the different forms of intracranial hemorrhages, subdural, cortical and intracerebral were most amenable to localizing diagnosis. The rules for the local diagnosis of these forms of hemorrhage were then given. Dr. Mills advocated the performance of trephining in exceptional cases of hemorrhage into the ganglia and capsules—cases in which symptoms indicated that the bleeding had not broken into and inundated the ventricles. For his dissections, the best site for operation in such cases, all things considered, would be in the anterior portion of the first or second temporal gyrus. He favored Hughlings Jackson's suggestion of excising localized cortical areas, even when coarse lesions could not be made out, in cases of spasm, beginning locally and deliberately. The inaccessible areas had been narrowed down by the venturesome surgical explorer until reduced to the middle regions of the base and its bordering convolutions, the corpora quadrigemina, the pons and medulla. The characteristics of localizing symptoms were

described as phenomena of irritation, destruction, instability, pressure, invasion, and reflex action. Signal symptoms and the serial order of motor phenomena were discussed. Briefly, in certain regions of the brain an accurate topographical diagnosis could be made with great certainty from positive localizing symptoms. These brain areas include the entire motor zone, in which are embraced the motor or emissive speech area—the region of Broca ; the visual area in the cuneus, giving lateral hemianopsia, and the intracerebral tracts, possibly also the angular gyrus, and the lateral surface of the occipital lobe. In other regions of the encephalon the topographical diagnosis could be made with sufficient accuracy, even for surgical purposes, by the study of the positive symptoms, with, in addition, the application of processes of exclusion and successive differentiation. Particular stress was here laid upon the importance of pressure and invasion symptoms. These areas for approximately certain topographical diagnosis include the cerebellum, the prefrontal lobe, the temporal lobe, and even certain cranial nerve districts, as the auditory and facial, when the lesion would be localized within the cranium between the superficial origin of the nerves and their entrance into their foramina or canals of exit. Motor localization has become almost an exact science. The latest physiological research bearing upon the subdivision of the motor area and the light thrown upon the question by surgical operations were discussed. It was held to be imperative for the neurologist and surgeon to have exact knowledge, not only of the anterior and posterior limits, but also of horizontal subdivisions of the motor zone. The old method of subdividing the motor zone into three elliptical or circular areas from above downward was considered insufficient, but the neurologist should be able to locate for the surgeon from a study of motor phenomena at least seven or eight positions for trephining, these positions being selected by a close study of the initial or signal symptoms, the serial order of movements, and also of the amount and character of the temporary paralysis after the seizure and the method of extension of the persisting palsy. Reference was made to operations performed through accurate localization in these areas. The view of Ferrier

as to the localization of the centre for ocular and head movements in the second frontal gyrus was concurred in, and observations were cited in its support; when turning of the head and eyes was the starting-point of the spasm, this localization was sometimes indicated. The fact that cortical oculo-motor palsies were not present as a persistent condition, even with definite lesions of the second frontal gyrus, was explained by the intimate and peculiar connections of the oculo motor nuclei at the base; they do not persist for the same reason that paralysis in the upper distribution of the facial nerve is so seldom permanent. He believed that there was a special centre for the orbicularis palpebrarum movements, probably below and adjacent to the oculo-motor centre. Dwelling upon the sources of error in motor localization, the questions of reflex spasm, of unilateral convulsions due to uræmia, lead, and other toxic agents, and hysteria and hystero-epilepsy were briefly discussed. Sufficient diagnostic difficulties are still present to make it important, in the light of the tremendous impetus toward operation, to examine carefully all questions of differential diagnosis. In certain spasmodic affections, the resemblance between those clearly of reflex origin and those as demonstrably central was very striking. Trigeminal epilepsy, whether dural, facial, dental, nasal, pharyngeal, laryngeal, or of whatever local origin, might cause unilateral convulsions or even mono-spasm. Dural epilepsies are especially worthy of attention, as shown by the researches of Dupuy, Brown-Sequard, Burdon Sanderson, the New York Society of Neurology and Electrology, Duret, Bochefontaine, and Francois-Franck. Franck has made a careful comparison and contrast of cortical epilepsies with those which are reflex and toxic, including those which are due to irritative lesions of the dura mater. He then referred to five cases in his own experience in which operations had been performed for epilepsies apparently reflex in character; two in which spicula of bone had been removed from the dura mater, one in which an old inflammatory lesion of the membranes and cortex from traumatism was present, and two in which scalp cicatrices were removed. While fearing with Franck, that we were not always able to make a trenchant separation between

reflex and cortical epilepsies, some points of separation were indicated.

True Jacksonian epilepsy, Dr. Mills believed, was sometimes reflex in origin—that is, that it was established by intense, persistent peripheral irritation, and even after the irritation had been removed the cortical discharge continued; herein, perhaps, lay the explanation of Jacksonian spasm without coarse lesion, and herein also, perhaps, was to be found the justification for the excision of cortical discharging areas. He referred to a case in which epilepsy, clearly of Jacksonian type, was just as clearly due to a fibroma involving a nerve trunk on the palmar surface of the hand, and in which the patient was cured by removal of the growth. With reference to sensorial localization, cutaneous and muscular, the views of Horsley and Schäfer with reference to the limbic lobe were accepted in part. He believed that the evidence is becoming stronger every day in favor of the existence of a zone for the sensations of touch, pain, and temperature separate from cortical motor areas. Collections of cases, such as those of Starr, Petrina and others, which were supposed to indicate that the sensory areas coincide largely with those of motion, were not regarded as overcoming the positive evidence of decided destructive lesions of the cortical motor zone without any sensory disturbance. From a study of his personal cases, he had concluded that they did not support the doctrine that the motor and sensory areas coincide. Notes of these cases were given and also cases from other reporters. He believed with Bechterew that the loss of sensation in animals which have had the motor area destroyed was apparent and not real. Some light had been thrown upon this disputed question by careful examination of patients after operation, particularly when certain cortical areas had been clearly excised. Reference was made to the cases of Horsley, Weir and Seguin, Lloyd and Deaver, and others. The speaker believed that these observations and experiments pointed clearly to the theory that the motor zones are motor alone in function. His view was that the region for general sensation, including touch, pain, temperature and perhaps pressure, location and muscular sense could be divided into

special areas for the various distinct portions of the body, and that these centres lay alongside and had close anatomical and morphological relations with corresponding motor centres, but that they were not identical with them. He located these sensory areas in the gyrus fornicatus, the hippocampal gyrus, the precuneus, and the lateral postero-parietal region. The practical conclusion was that the neurologist and surgeon must depend upon motor symptoms alone in fixing the site for operation in cases in which the motor lesions are definite. When positive sensory symptoms are present, they may sometimes serve to aid in locating more exactly the position for operation, but the data are not sufficient for positive reliance. The question of morphological peculiarities of the human brain was briefly alluded to as having some practical bearing upon the subject under discussion. The position of the so-called angular gyrus and aberrations in the parieto-occipital region were more particularly discussed. Even the fissure of Sylvius, the central and the parieto-occipital fissures sometimes present considerable variation, but, as a rule, such aberrations are not confusing in operating on the motor region after the method of Broca, Thane and others. Dr. Mills concluded by saying that the discoveries in cerebral localization with the achievements in antiseptic surgery constitute the greatest triumphs which adorn the history of the noble science and art of medicine.

Dr. Roswell Park of Buffalo spoke as to the surgical aspect of the subject, and omitted consideration of those cases in which operation is dictated by a study of the subjective rather than of the objective features.

Cerebral topographical anatomy. The areas which most concern the surgeon are those which cluster around the fissure of Rolando. A few bony prominences deserve attention in this connection—that at the point of the nose known as the glabella, the external occipital protuberance, known also as the inion; the point of the vertex half way between these two—the bregma; the external angle of the orbit, the tip of the mastoid process and the lower border of the alveolar process of the upper jaw. The fissure of Rolando has its upper end about five centimetres

back of the bregma, but does not run quite in the middle line, its lower end lies about one-half centimetre behind the auriculo-bregmatic line and a little above an imaginary line projected backward from the superciliary ridge, thus the lower end of this fissure will be found about six centimetres above and a little behind the external auditory canal; or about an inch behind the bifurcation of the fissure of Sylvius. In regard to the convolutions, it must be stated that lesions of the dura mater overlying motor areas are not always to be distinguished from lesions in the cortex beneath. It is enough for the surgeon that a lesion of some kind can be located with reasonable accuracy. It matters not whether this is an old, irritative lesion; an acute suppurative process between the bone and the brain, or an abscess or tumor of the brain itself. The indication for exploration is just as strong in either case.

When and where can one trephine with safety? The safest rule is first to apply the trephine over those areas which do not overlie large vascular channels. Afterward the opening may be extended in any direction and to any required extent. The greatest hesitation is with regard to opening one of the sinuses. Two dangers attend such an accident, one fatal air embolism, the other profuse hemorrhage. The former danger is almost a theoretical one, and the other may be overcome by plugging the sinus, or closing its wound with a fine needle and suture.

Cerebral and cerebellar abscess. Bergmann has shown that abscess of the brain has but one result—death—and that the surgeon's knife offers the only relief. So far as we know there is no such thing as idiopathic abscess of the baain; it is always the result of some external wound of the head or some extension from diseased surrounding bone. The only exceptions to this statement are to be found in the case of pyæmic or tuberculous abscess. The symptoms of deep brain abscess may be divided into three groups according to causes: 1. Those which are inseparable from indications of suppuration. Such are those disturbances which may follow any deep-seated foreign body. 2. Symptoms of increased intracranial pressure and of disturbed relations. 3. Special symptoms by which the locality of the

disturbance may be ascertained. As long as the gray matter is undestroyed, the collection of pus may assume large dimensions, and still no intense motor symptoms appear. Local elevation of temperature over the abscess is a symptom of importance when present, but its absence need not negative a diagnosis, if made on other grounds. Wernicke has stated that there is a peculiar disturbance of speech which points to lesion of the temporal region. This is the confusion of correct with incorrect words. In the general diagnosis of cerebral abscess, it is to be remembered that there usually is a latent period which may continue for an indefinite period. The stage of active symptoms is usually ushered in by more or less headache; slight rise in temperature; local or motor symptoms can only be expected when the abscess is in the motor area of the brain.

In operating for abscess of the brain, operators, until recently, have satisfied themselves with incising the dura and doing nothing more. With the introduction of aspirating methods, the hollow needle came to be used for brain exploration. The dangers of this procedure are certainly small. The danger of hemorrhage has been over-estimated. A temporary tampon will control deep hemorrhage, while, in bleeding from the pia mater, the vessels may be secured with ligatures or serre-fines. In brain abscess consequent upon middle ear disease the best point to trephine, according to Bergmann, is above and behind the ear. Macewen proposes a second counter-opening on a level with the floor of the abscess.

Brain tumors. The principal features of these growths which produce symptoms are location, size, character, rapidity and manner of growth, and extent to which they affect surrounding brain tissue. Considered in their surgical relations, we may, with Bergmann, divide them into (*a*) the circumscribed or encapsulated, and (*b*) the infiltrated or diffuse, around which, as a rule, there is a zone of softening. A third class may be mentioned, *i.e.*, those growing from the interior of the cranium, from the bone or dura. If a reasonably satisfactory diagnosis can be made, it must be, indeed, an extensive growth of the cranial vault which shall contraindicate operation. The question what

and how many brain tumors are operable has been best answered by White. He found in one hundred brain tumors met with in the dead-room of Guy's Hospital that only nine could have been removed—one tuberculous nodule, four sarcomas, two undetermined tumors, one cyst, and one myxoma. Nine per cent. could have been attacked, providing a fairly accurate diagnosis had been made. Of these nine tumors, five were located in the cerebellum, one in the frontal lobe, and one in the extremity of the occipital. It is doubtful whether these seven could have been recognized accurately enough during life to justify operation; while the myxoma was impossible to diagnosticate. It is thus seen that by no means all tumors which can be diagnosticated can be deemed suitable for operation.

Operation for intracranial tumors. The head should be shaved two or three days before operation, washed with green soap and ether, and antiseptic compressors applied. Chloroform should be, as a rule, the anæsthetic, on account of its contracting influence on the vessels of the brain. Morphia, hypodermatically, and ergot may be resorted to for the same purpose. The author suggested that, after localizing the lesion, a small, disinfected headless tack be driven through the scalp into the bone at the point determined upon. After the dissection of the external flap this will point out accurately the point to be first attacked. In order to prevent hemorrhage the author had found a spray of antipyrin solution (1 to 40) of service. The semilunar flap is the proper shaped one to raise. Its apex should be in such a position as to allow of drainage with the patient on his back. The periosteum should preferably be raised with the flap. The use of the trephine is preferable to the hammer and chisel. Since Macewen has taught us how to preserve the fragments of bone and restore them to their place, his method has been widely tried and universally commended. The dura mater should be incised around a large part of the area at a distance of one-eighth to one-quarter of an inch from the edge of the bone. The appearance of the dura is sometimes a guide to trouble beneath. In recent cases it is sometimes highly vascular, in old cases it may be yellowish or discolored. Whenever adherent it should

be freely excised. Horsley claims that marked protrusion of the dura indicates pathological intracranial tension. The color of the brain should be noted, remembering that the cerebellum has normally a different appearance from the cerebrum. Sometimes, where there is uncertainty as to which convolution is the desired one, the battery may be employed. When no indication of lesion is found, further exploration may be conducted with a small aspirating needle or a blunt probe.

Should a tumor be discovered, the incisions for its removal should be made perpendicularly to the cortex for the purpose of avoiding hemorrhage and division of the conducting fibres. Removal of a layer of cortex, whether normal or abnormal, does not leave, as one might fear, a prominent gap with vertical sides, since, in a short time, the depressed portion is made to bulge almost to the level of the intact parts surrounding. In addition the cut edges are also slightly everted, and, if less brain is removed than bone, the edges are extruded into the opening in the skull; thus there is a continual normal tendency to hernia. Bergmann and others have shown that this tendency to hernia cerebri is in inverse ratio to the area of bone removed. Experience has taught that it is wise to remove brain tissue to an extent greater than was at first considered justifiable. In all operations or epilepsy the portions of cortex nearest the evident lesion should be freely removed. The matter of drainage must be determined according to the circumstances of the case. An abscess must be drained as long as pus is discharged. After the antiseptic removal of a tumor, the cavity should seldom be drained for more than twenty-four hours. The provision for drainage may be removed on the second day, and the wound dressed with reasonable pressure over the flap. Exudation naturally collecting in this cavity will be retained and will give rise to some pain and disturbance, but so long as the symptoms from this are not severe, the wound may be left with confidence that the fluid will be reabsorbed, and that the pressure will be the best check to protrusion.

Dangers of the operation. The principal immediate dangers are two—hemorrhage and œdema. Hemorrhage from the pia

or from the brain substance is usually readily controlled, but disastrous hemorrhage may occur from unexpected sources. When there is bleeding, a temporary tampon of iodoform gauze may be applied. The dural and skin flaps are laid over this, and an absorbent dressing applied. At the end of forty-eight hours this may be removed and sutures inserted. The second danger, that of acute brain œdema, may be brought about either by increase of intra-arterial pressure or by obstruction of the venous channels of escape. Under this accumulation the brain becomes more sodden. Removal of a portion of the cranium is virtually a diminution of the pressure normally exercised on its contents and is often followed by reaction with production of excess of fluid.

He had collected reports of 63 cases which were presented in summary and tabular form; 17 of these terminated fatally, although only 5 of these deaths could properly be attributed to the operation; 15 of the cases were abscesses, subdural or subcortical. In 11 cases the lesion was a tumor, exclusive of tubercular nodules. Of cysts, properly speaking, there were 12. The 25 other cases were of a miscellaneous nature. In 3 cases, the true character of the lesion was not revealed during the operation, and was only discovered at the autopsy. In 2 cases, in which no palpable or visible lesion was discovered at the time of operating, the symptoms which led to the performance of the operation were nevertheless relieved, though nothing but careful exploration wes practised. Of the 63 operations, 17 were performed by American surgeons. Those who have themselves operated more than once are, with the number of their operations, Macewen, 12; Horsley, 11; Bergmann, 4; Weir, 3; Keen, 3; and Park, 3.

Dr. D. Ferrier of London said he had listened in common with every one else in the room with the very greatest pleasure and profit to the extremely able papers which have been read before the Congress, and in which were so clearly expounded the principles of cerebral localization and of the surgical treatment of cerebral disease. He took especial personal pride in the fact that the question of cerebral localization and its practical appli-

cation had been assigned a very important place in this gathering of the profession of America. It had been for many years a cherished idea with him, long before it had taken any definite shape or crystallization, that the accurate determination of the functions of the brain would in time lead to the successful treatment, by surgical means, of the most distressing ailments to which our fellow-creatures are subject. Regarding the results of his experiments upon monkeys and other animals, he sounded several of his surgical colleagues with a view to obtain from them assistance in cases which he thought might be the subject of successful surgical procedure, but received little encouragement from them. He was told that men were not monkeys, though they may be descended from them. About five years ago, at a meeting of the Medico-Chirurgical Society of London, he ventured more boldly to advocate the surgical treatment of cerebral disease, but he was honored with a denunciatory leading article in the *Lancet*, and thought this was so curious that he took note of it at the time. If one bears in mind the brilliant results of Macewen, Horsley, Keen, Weir and others, he thought he would see that cerebral surgery has amply vindicated itself as a justifiable branch of the art of surgery. When we consider the numerous cases of tumor that have been successfully removed, of abscesses evacuated, of epilepsy permanently cured by surgical procedure and in cases which have been clearly indicated from the localizing symptoms alone, then he thought one would say there is likely to be a great future before the cerebral surgery of to-day. He thought, however, we must be cautious, because in our newborn enthusiasm we may be apt to do things our better judgment and larger experience may not consider justifiable. He did not think the dangers of cerebral surgery to be altogether due to septic inflammation. There have been cases which have not been successful. He has seen several of these that have occurred in his own practice. That, however, is not more than is true of any great surgical operation. He thought that the cases of recovery are distinctly much larger in proportion than those in which evil results have followed. He confessed that in some respects he had been disappointed in re-

gard to some of the cases. He alluded more particularly to those cases which Dr. Mills referred to as being the subjects of Jacksonian epilepsy. In these cases we have reason to believe there has been an irritative lesion directly localized in a definite portion of the brain. Cases of this kind have been operated upon, the discharging lesion has been removed, and certain cases have been permanently cured. Nevertheless, from the fact that some have recovered, he thought it would be well to give the patient at least the benefit of the doubt. In endeavoring to cure our patient we may also inflict a greater evil, and he himself shared very largely Mr. Macewen's opinion that to render a patient hemiplegic would be a very questionable cure for unilateral convulsions. There is still a good deal of work to be done both in regard to determine the function of the brain and also in determining the accurate diagnosis of cerebral disease. We know now a great deal more than was known a few years ago, but still there are regions which are practically to us a *terra incognita*, and it will require much laborious work before we can say we have gained a thorough knowledge of the functions of the brain. There are a good many differences still prevailing among those who believe thoroughly in the doctrine of localization in regard to the exact limits of the region supposed to be endowed with specific functions. These differences are regarded by the opponents of localization as signs of a divided household. He did not think so. He regards them as signs of healthy activity. They are only family jars. As there were several speakers to come after him, who were to address the Congress this evening, and particularly his distinguished colleague, Mr. Horsley, who has done so much for cerebral surgery, he would no longer trespass upon the patience of the audience, but would thank them for their very great reception of this evening with which they had favored him.

Mr. Horsley remarked that in the course of what he had to say he should have occasion to refer to numerous experiments. These experiments have been performed by himself in conjunction with other observers, and therefore when he referred to them as his own work he wished they should understand that he was

simply the spokesman of his colleagues, Prof. Shäfer, Beevor, Gotch, and Dr. Semon. The subject is so enormous, he was at the greatest difficulty to know in what way he could be of any service to the meeting. It occurred to him that he had better take up a distinct line and give in detail, so far as he was aware, the latest points that have occurred in that line. He would therefore give some facts and ask them to take on trust the observations on which these facts in a great measure rest. He would confine his remarks entirely to that region which Prof. Ferrier was the first to map out, viz., the so-called motor region. He believed that in the so-called motor region they had three functions clearly represented: 1. Slight tactile sensation. 2. The so-called muscular sense. 3. Movement. He would ask them to remember the yet more fundamental principles which underlie our information on this subject. They must understand that these three functions are wrapped up closely together, and that in each particle of the cortex there are represented all the segments of the body in a varying degree. If they adopt the views of Dr. Hughlings Jackson, of course they all believe that in the corpuscles of the fourth layer is the seat of representation movement. It seemed to him that they cannot refuse to believe that the small corpuscles are similarly the seat of representations of 1 and 2—*i.e.*, sensory representations. The evidence upon which this belief is founded is to be found in experimental evidence and clinical observations. Facts of this kind he has published at length. Passing from the representation of a tactile and muscular sense, he would say a word or two upon the needs of representation of movement in this so-called motor cortex. It seemed they must consider this very closely if they were to gain an accurate knowledge of the representation of the different segments of the body. Prof. Ferrier was the first to give them a correct map of the representations of the face, arm and leg. Dr. Mills has stated that Prof. Shäfer and himself showed that the trunk was represented on the mesial surface of the hemisphere. Dr. Beevor and he believed it would be perfectly possible by laborious investigation to split up these centres very minutely. The method adopted was as follows: They divided

this so-called motor area into squares two millimetres in length, and they excited each square of the cortical surface with a very weak faradic current—in fact, the weakest stimulus that would produce any movement at all. He would illustrate the general result of the observation, and would take for that purpose the representation of the movement of the thumb. The representation of the thumb is focussed in front of the lower end of the intracranial sulcus, and it extends over a great deal of the upper limb area. This representation gradually diminishes in intensity of representation as we pass from the focus upward. The shoulder and the thumb form the two most important parts of the upper limb. The shoulder is represented in exactly the opposite part of the upper limb area to that of the thumb, and it conversely diminishes in intensity downward. The question of the limitation of the whole area of representation of any given segment is most important. Dr. Ferrier has always held that these areas are limited by hard and fast lines, and no one area trenches upon another. Unfortunately, he could not follow his honored teacher in this belief. He was perfectly sure these were what may be called border centres, and in one portion of the brain Dr. Ferrier himself drew attention to the fact that in one spot we have representation of the two limbs. The representation of the face at its upper border merges into the representation of the upper limb. So if they have a focal lesion at that spot there are two "signal" symptoms. For diagnostic purposes it is absolutely necessary for us to be aware of the relation of one focus to another. He would now turn to the question of the representation of the character of movement. Dr. Ferrier, in his monograph published in 1874, pointed out that in certain parts of the so-called motor region there were certain movements represented. Dr. Beevor and himself carried this further, and could trace gradation of representation of different movements. He would give two examples. At the upper part of the upper limb region extension of the elbow is represented, whereas in the lower part of the same region flexion is represented, and between the two there is confusion. This practically holds true of the various segments of the body. He would give one more example, which gives

him special pleasure. It is an example of the representation of extension of the wrist which Dr. Keen referred to in his cases before the Surgical Association. In his diagnosis he had figured the exact spot where, according to Dr. Beevor, extension of the wrist is most represented, that is the anterior border of the upper limb region. This point is specially interesting to them, because they are in a position to show that extension of the wrist must precede every fine movement of the limb. This brings to a conclusion what he had to say of representation of movement. The facts referred to as being observed by Dr. Beevor and himself are in harmony with the facts observed by Prof. Schäfer and himself. There are minute points of difference due to the species of monkey employed. During the past two years they had employed but one species of monkey.

He would now speak of cortical epilepsy. Cortical epilepsy consists of several stages; of a preliminary aura, then a tonic stage, then a latent period, then the clonic stage, and then, finally, the stage of exhaustion or paralysis. For five years he has been making observations respecting the possibility of finding out which of these kinds of spasms in a muscle are due to the cortex cerebri alone. Here they must look upon the convulsion from two points of view. The connection between the cortex and the spinal system is, of course, brought about by the pyramidal tract. Now, obviously, if they investigate the convulsed muscles by the ordinary graphic method, they should obtain a tracing, the uprising of which indicated the tonic stage, then a pause and a fall; then little waves to indicate the clonic convulsions which succeeded the tonic stages. It might be thought the whole of these convulsions was due to the cortex, or the tonic stage to the cortex alone and the clonic to the spinal alone. Gotch and he had found it possible to tap the motor tract in the dorsal region and then to stimulate the cortex and measure with a very delicate electrometer changes in the pyramidal tract. The variations indicate the impulses coming down from the cortex streaming down the pyramidal tract. It is perfectly justifiable to assume that these variations exactly correspond with the nerve impulse. Of course, they know nothing of nerve energy

itself except its speed of transmission. Therefore they investigate its character by means of the concomitant negative variations which attend the passage of nerve impulses. They had thus found that the whole of the character of the convulsion is entirely due to the cortex; with this electrometer it is possible to photograph a record, and the photographed record is given under the graphic record on this diagram. And they can see they correspond in character.

He would now conclude with a few remarks upon the so-called practical part of the subject—he meant cerebral surgery. There are a few points of special character, and to these he would allude. He had nothing to add on the subject of his previous papers. The bone is marked with a fine drill through the scalp. He would urge the cutting out of a piece of bone by an inch drill. Then quickly, with a circular saw, open a large area by almost cutting through the skull, then with a brim forceps quickly cut away the area marked out. Before, of course, such forceps are applied to the skull it is best to separate the dura mater. The dura being exposed if we perform exploratory operations, it is, he thinks, a terrible thing for the patient if the dura is not opened. He was perfectly aware that the risk was greatly increased if care is not used in the preparation of antiseptics for the operation. With regard to faradism, this is a point upon which the activity of his American colleagues had gone further than in Europe. Many interesting practical points are to be gained from faradism of the cortex if it is exposed. He now passed on to hemorrhage. He believed the parenchymatous oozing may be stopped by the use of morphia and ergot, as Dr. Keen has suggested. But the ligature must always be applied, if possible. The wound should never be plugged, as it is disastrous to do so. The method of ligation is with catgut, applied by exactly even and gentle traction on the two ends so as to avoid cutting through or tearing the delicate vessel. He would refer to a source of regret in this kind of surgery, viz., the death of the patient. He would say that it is exceedingly dangerous to operate upon a patient who is under the influence of drugs, and especially the bromide of potassium. They should

endeavor, as far as possible, to take the patient from under influences of that sort. Another regrettable point is the failure of the object for which the operation was undertaken, viz., recurrence of the epilepsy. He believed this was almost invariably due to incomplete operations. Cases in which he had completely removed not only the lesion but also at least one centimetre of the surrounding brain substance remained free from epilepsy. The cases in which the epilepsy recurred, he did not remove, to his entire satisfaction, all the damaged brain substance around the lesion. The prognosis of a case after operation must be guarded. If we operate upon such cases, it must be early. He thought there was some danger of doing too much in certain cases. He believed, on the other hand, that they stood in considerable danger from statistics. In conclusion, he begged to thank the members for the very kind manner in which they had received him to-night, and also for the generous feeling of hospitality and friendship with which they greeted him on his visit to this country.

Dr. Keen of Philadelphia said that we distinguish in the body three cavities—the cavity of the head, the cavity of the chest, and the cavity common to the abdomen and pelvis. In the chest, abdomen and pelvis we recognize a large number of separate and distinct viscera with separate and distinct functions. We can investigate the diseases of each viscus and locate them according to the physical signs and the symptoms presented by the history of the case. Until very lately the head was regarded as a cavity containing one viscus acting in its entirety like the liver, spleen or kidney. If it were affected, we were not able to distinguish one part from the other, but in his opinion we ought to regard the brain cavity precisely as we regard the chest cavity or the abdominal cavity, as a cavity containing a number of viscera, fused physically but separate physiologically. If we recognize this fact that the head cavity is a cavity containing a number of viscera, and that each viscus has its appropriate function, we shall at once have a much clearer conception of the functions of the head and its viscera, and, therefore, of their diseases and injuries. He was very glad that a warning note had been sounded

to-night both by Dr. Ferrier and Mr. Horsley as to over-rashness. We are only just beginning to find out what operative surgery can do in the brain. We are in danger of very greatly overdoing it, while on the other hand we must be equally cautious in the other direction. We must take, in the head cavity, a warning and an encouragement from the history of the surgery of the abdominal cavity. The timidity with which surgeons approached the abdominal cavity was somewhat remarkable in the early days of abdominal surgery. Their boldness now is almost appalling, and the success equally gratifying. He was very glad to hear Dr. Parks to-night advocate exploratory operations. We must do with the head cavity just what we do with the viscera of the abdomen. We must sometimes open the abdominal cavity in a case of intestinal obstruction in order to make a diagnosis, and we must do so in the case of the head. We have all got to learn the limitations of operative interference from experience, and at present we have to make the experience. A very good illustration of this was furnished to him recently. A gentleman consulted him with reference to an intense headache in the back of the head, presumably the result of a fall. He called Dr. Mills and Dr. Oliver to examine the case, and they found no localizing symptoms. He declined to operate on the ground that he could find no localizing lesion. The patient afterward went to Dr. Weir. Dr. Weir trephined him, basing his operation on the point of the focus of the headache, and he cured his patient. He did not suppose Dr. Weir understood anything more about the nature of the trouble than he did, but he did better with his patient. This is a simple illustration of what boldness will sometimes accomplish.

Dr. M. Allen Starr of New York said that it was evident, from the statements to which they had listened, that cerebral surgery has a great future, but that it is largely dependent upon neurology. The surgeon is ready to proceed when the neurologist can indicate the way. The responsibility for future progress rests with physicians. It is to be met by the careful observation of cases, their thorough examination, their collection and analysis; for it is by this method that progress has always been made in the past. The examination of cases has not always been com-

plete, and needs careful preparation. This was especially true of the cases assigned him for discussion, viz., disturbances of speech. In the history of aphasia there have been three epochs. First, that of Broca, when it was established that lesions in the posterior part of the third frontal convolution of the left side in right-handed and of the right side in left-handed persons caused aphasia. Secondly, the epoch of Wernicke, in which a broad distinction was made between motor aphasia, the variety described by Broca, and sensory or amnesic aphasia, the lesion of which Wernicke showed to be in the first temporal convolution. Thirdly, the epoch of Charcot. Charcot says "a word is a complexus; in it one can discover four distinct elements: the auditory memory-picture, by whose means we are able to grasp the sense of words heard; the visual memory-picture, which enables us to comprehend the words written or printed; and also two motor elements—that is to say, the motor memory of articulation and the motor memory of writing: the first developed by the repetition of movements of the tongue and lips necessary to pronounce a word; the second by the practice of motions of the hand and fingers necessary for writing." These memories, then, joined by anonation, form the mental substratum of language. But since they are distinct, each may be lost, while the others remain. The loss of visual memories results in word-blindness; the loss of auditory memories in word-deafness; the loss of motor memories respectively in agraphia and motor aphasia. Individuals differ widely in the development of various mental powers. Some remember things seen better than things heard, faces rather than names; others write down what they wish to remember. In these different persons aphasia presents different features; the student suffering more from word-blindness than the laborer. Each of these clinical distinctions has a pathological basis. Motor aphasia is due to lesion of Broca's centre, and this is easily accessible to the surgeon in case the disease is open to his interference. The lesion in agraphia is still undecided. The situation of the lesion causing word-deafness is in the first and second temporal convolutions in their posterior two-thirds. [A diagram was shown, on which all the cases of pure sensory aphasia hitherto

published were laid down (forty-three in number), and the situation of the lesion was shown.]

Word-blindness was also discussed, and shown to be due to a lesion in the angular gyrus. This symptom is often attended by psychical blindness, in which the patient can see but cannot recognize objects. The lesion in these cases is deep, involving the association fibres beneath the angular gyrus. It may be possible in future to select lesions of other association tracts beneath the cortex if cases are properly tested—such acts as repeating words after one another, copying, writing at dictation, involving the action of these tracts. Pure aphasia of any of these varieties is rare. The usual form is mixed aphasia, both sensory and motor elements of speech being affected. Here the lesion is in the Sylvian region, and involves both temporal and frontal lobes. Here it is accessible to surgical interference, and the indications are plain. For though we can no longer speak of the speech-centre, we can speak of the centres of motor and sensory and mixed aphasia, and each offers a sufficient guide to the surgeon, as definite as motor spasm or hemianopsia.

Dr. Robert F. Weir of New York said that he had been always very handsomely treated by physicians, and he had been very handsomely treated to-night by Dr. Keen. It had been his good fortune, commencing in 1883, to have practised what is now called brain surgery in ten instances—three times for tumors, three times for cerebral abscesses, twice for hemorrhage into the cerebrum where there was no external hemorrhage, once for epilepsy, and once for cerebral pain. His last case of brain surgery, which had been made the subject of a paper by Dr. Seguin and himself in the *American Journal of the Medical Sciences*, is exemplified in the brain he would pass around for inspection. This case illustrates a point of some importance. It was so deep that in exposing the brain they were within an ace of not recognizing the tumor. It was only detected after some difficulty, deep in the brain substance. Bergmann has stated that an operation for the removal of a brain tumor should not be undertaken, first, when the tumor is large ; and, second, when the patient is in a state of coma. Dr. Keen removed a tumor over

four ounces in weight, and recovery took place. Mr. Horsley removed a four and a half ounce tumor from a man in a state of coma. So he thinks facts are at variance with this theory of Bergmann. In the first case of tumor upon which he operated there was an error of diagnosis. The brain was opened and no tumor found. The bone was replaced, the skin was fastened, as advised by Horsley, and the patient recovered. The headache disappeared altogether, paralysis improved, and the patient lived two months. Another case was reported by Mr. Heath of London, in which the tumor was attached to the bone at the base of the skull, and was not removed. The headache was relieved, paralysis improved, and epilepsy ceased for a time. In cases of hemorrhage threatening life his plan is to do the operation as an exploratory one, take away a portion of the skull, and if he finds the blood clot remove it. He had gone over the brain a year and a half ago to see how much could be done in the way of surgery, to find out whether the longitudinal sinus and lateral sinus were things we could avoid. He found he could strip them up from the anterior surface of the skull to a goodly length. He had stripped the lateral sinus from its bed to a distance of about an inch. He had stripped up the dura upon a living subject in ear trouble to a distance of one and a half inches. He had been able to raise up the frontal sinus until the anterior glenoid processes were exposed. He had been able to feel the foramen magnum. He had recently tapped a cerebral abscess on the under surface of the sphenoid bone just anterior to the foramen rotundum and ovale, being led to these regions by necrosis. He believed one can reach very many portions of the brain providing our neurological friends give us information thereon.—(*Medical News.*)

BRITISH COLUMBIA MEDICAL COUNCIL.

The semi-annual meeting of the British Columbia Medical Council was held at Vancouver on the 6th and 7th of November. There were present Drs. Davie (Victoria), President; McGuigan (Vancouver), Vice-President; Milne (Victoria), Registrar; DeWolf Smith (Westminster) and Tunstall (Kamloops).

After the minutes of the previous meeting had been read and confirmed, the Registrar announced that there were five candidates for the license. Several unlicensed practitioners were reported from different parts of the Province, and the Registrar was instructed to put their cases in the hands of the solicitor to the Council. It was also reported that an alleged physician, calling himself Dr. Millar, in Vancouver, had been fined twice since the meeting of the Council in May last for practising without a license.

The examination of the candidates for the license was then proceeded with, and the results satisfying the Council, the Registrar was instructed to issue licenses to the following candidates: A. W. Pearse, Yale; W. A. Richardson, Donald; John T. Carroll, G. D. Johnson and W. Reinhardt, Vancouver.

After concluding some unimportant business, the Council adjourned to meet in Victoria on the first Tuesday in May, 1889.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Annual Meeting, October 5th, 1888.

JAMES PERRIGO, M.D., PRESIDENT, IN THE CHAIR.

REPORTS OF OFFICERS.

The TREASURER (Dr. J. A. MacDonald) reported the finances of the Society to be satisfactory, the total receipts for the year being $399.57 and the expenditure $393.35; balance on hand $6.22. The treasurer also reported that there were many subscriptions for the year still unpaid.

The SECRETARY (Dr. Ruttan) reported that 83 notices were issued for each meeting, the maximum attendance at any one meeting being 37, the minimum 17; the average attendance for the year 21.7. In all, 20 meetings were held and 15 new members elected.

The LIBRARIAN (Dr. T. D. Reed) made the following report: In the reading-room the following journals are received—

Weekly: London Lancet, British Medical Journal, New York Medical Record, and Philadelphia Medical News.

Monthly: American Journal Medical Sciences, American Journal of Obstetrics, London Practitioner, Canadian Practitioner, Canada Lancet, Montreal Medical Journal, and Canada Medical Record.

Quarterly: Asclepiad, London.

In the library we have a valuable series of the London Lancet, bound, from 1844 to 1888, for the first thirty-six years of which we are indebted to Dr. Fenwick; twenty-four volumes of the London Medical Gazette, from the same donor; the following journals, bound, from 1880 to 1888, British Medical, New York Medical Record, Philadelphia Medical News, Canada Medical and Surgical Journal, and Canada Medical Record.

A number of volumes of English, American and Canadian Medical Journals have been donated by Dr. Kennedy, amongst them the first volume of the Canada Medical Journal. This volume is valuable on account of its earliness, and is now quite scarce.

Total number of bound volumes, 155.

ELECTION OF OFFICERS.

The election of officers for the year 1888-9 resulted as follows:

President—Dr. Wm. Gardner.

1*st Vice-President*—Dr. G. E. Armstrong.

2*nd Vice-President*—Dr. F. Buller.

Secretary—Dr. R. F. Ruttan.

Treasurer—Dr. J. A. MacDonald.

Librarian—Dr. T. D. Reed.

Council—Drs. Geo. Ross, A. D. Blackader, and Jas. Stewart.

DR. LAFLEUR exhibited for Dr. Geo. Ross specimens from a case of perforating appendicitis. Report and discussion were deferred until next meeting.

Stated Meeting, October 19th, 1888.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

A Case of Perforating Appendicitis.—DR. GEO. ROSS gave the following history of the case:—On the 4th inst. I first saw A. M. in consultation with his medical attendant, who had first

seen him three days previously. He was a healthy lad of 17 years of age. I learned on inquiry that he always had perfectly good health, with the exception of some three or four attacks of so-called *colic* which had occurred within the past two or three years. These attacks, as described, were all very similar, and consisted of a somewhat sudden pain in the lower part of the abdomen and towards the *left* side, not very severe, and always soon relieved by a hot application and a mild anodyne; there was usually vomiting a few times. The following day a dose of castor oil was given, and then he appeared quite well again. He was never away from his work for more than two days from any of these attacks. In the intervals he suffered no digestive disturbance of any kind, the fæcal evacuations being quite regular and normal. Early on the morning of the 1st he awoke with violent pain across the belly, chiefly the middle zone, and towards the *left* iliac fossa. Vomiting soon occurred, and was several times repeated during the day. The attack was looked upon as the same as he had previously suffered from, and was treated in the same way. He was seen by Dr. B., who recognized peritonitis, and precribed opium in moderate doses and poultices. The inflammation progressed, and when seen by us four days later his condition was as follows: Face of characteristic abdominal expression, but not specially anxious-looking; color good; complains of a good deal of pain in the lower part of the belly and to the left side; no pain upon the right side; flatulence is annoying and increases the pain; the abdomen is moderately distended, chiefly in its lower half; parietes very firm and resisting; tenderness, not exquisite, but well-marked, mostly in the hypogastric, umbilical and left iliac regions; pressure is better borne in the right iliac fossa than in almost any other part, and palpation of that region fails to detect any deep-seated fulness or resistance; vomiting is quite frequent, the ejecta being bile-stained fluids, sour-smelling, but without any bad odor; the bowels had been moved by enema the evening previous; pulse is frequent, 120, and weak, but of fair volume; temperature 98°F. (the temperature the day before had been 101°F.) The diagnosis lay between an acute obstruction and an acute peri-

tonitis, and I entirely favored the latter view, believing that obstruction could be readily excluded. The only question, then, was to decide, if possible, the cause of the peritonitis. The sudden onset and rapid progress of the case suggested perforation, and therefore our first thought was of an appendicitis. It will be observed that the history gave some support to this idea, the difficulty being that the pain had always been referred to the *left* side. This also was the situation of the pain and the greatest degree of tenderness. The ultimate diagnosis therefore was acute purulent peritonitis, which was an attack depending upon some previous disease in the lower portion of the abdomen—that this might be an appendicitis, but the evidence on this point was inconclusive. I gave it as my opinion that the boy would not live more than twenty-four hours if unrelieved, but I strongly advised opening the abdomen. I fully realized the fact that four days had already elapsed, and that the peritonitis was already very extensive, which rendered the chances of success very small. I believe, however, that it is maintained by operators of experience that the existence of general peritonitis is not a contra-indication to the operation, and the condition of the patient seemed to justify the attempt. I had him removed carefully in the ambulance to the hospital, where laparotomy was performed by Dr. Shepherd.

DR. SHEPHERD said that when he saw the case with Dr. Ross, the patient was in a very hopeless condition; he had a pulse of 150 and very weak; vomiting was continuous. There was no tenderness on deep pressure in the iliac region, nor was there any fulness. The only very painful point was a little below and to the left of the umbilicus. It was decided to give the patient the very small chance offered by operation. An incision some two inches long was made in the median line below the umbilicus and two fingers introduced; nothing could be felt but distended intestines, and the cæcum could not be reached, so the incision was enlarged and the hand introduced; no collapsed intestine could be felt, but quantities of lymph covered the intestines, and some fetid pus escaped from the wound; the right iliac region was explored, the appendix was felt hanging over the brim of the

pelvis, and was apparently normal, though somewhat distended. For purposes of further exploration some of the intestines were drawn out of the abdomen and the cavity washed out with hot water. A large quantity of pus and lymph was evacuated from the bottom of the pelvis. In order to return the distended intestine an incision was made in it to allow the gas to escape; this incision was closed by Lembert sutures. The abdominal wound was now closed, a glass drainage-tube being left at the lower end. At the end of the operation the boy was much collapsed and his pulse had failed markedly. He rallied somewhat, but died next morning. After the operation there was no more vomiting. An autopsy was made by Dr. Lafleur, who found that the cause of peritonitis was a perforation of the appendix. This appendix was found hanging over the brim of the pelvis, and it was in a gangrenous condition. It was folded up on itself, the perforation was situated within the fold, and could not be seen until the parts were dissected out; to the feel the appendix was normal. There was a great quantity of lymph on the intestines, and in the true pelvis the folds of intestines were glued together in every direction. Dr. Shepherd remarked that although he had examined the appendix at the time of the operation with his fingers, he had not seen it, and that this case taught him that in cases of general peritonitis the appendix should always be examined by sight, even if the history and symptoms of the case do not point to this part as being the origin of the affection. If the cæcum and appendix cannot be brought to the surface at the median incision, they should be examined through an incision made in the right iliac fossa. The position of the appendix, viz., pendent in the cavity of the pelvis, explained in this case the absence of local symptoms; although the pelvis was examined before operation per rectum, nothing was made out. He also remarked that these cases of perforating appendicitis in which the peritonitis was diffuse from the first, operation gave much less hope of cure than when there was from the outset a distinctively localized area of inflammation, characterized by the existence of a tumor.

Discussion.—Dr. Roddick asked if, in Dr. Shepherd's opinion,

anything could have been done had he been able to make a diagnosis.

DR. MILLS said the position of the appendix might account for the necrotic condition, since it was such as to cause reduction of the circulation and lead to strangulation.

DR. HERVEY of Calcutta, after being introduced by the President, made a few remarks on the objections to laparotomy prevalent among the natives of India. It was rare to get a native to undergo any new operation, and, unfortunately, as most of the laparotomies were undertaken in extremis, the mortality was very high, and a strong prejudice existed against it. He also related a case of perforation of the appendix caused by a lemon seed.

DR. ROSS strongly urged the necessity of early operation in these cases; he did not advise postponing operation beyond the third day. Cases are now reported where operation was performed within twenty-four hours. In this case, as the operation was not performed until after the fourth day, success could scarcely be hoped for.

DR. SHEPHERD, in answer to Dr. Roddick, said that had he made out the gangrenous condition of the appendix he would have ligatured and excised it, but he did not think the result would have been influenced even if the appendix had been excised.

(*To be continued.*)

—Dr. Joseph O'Dwyer, the originator of intubation of the larynx, has been appointed Professor of Diseases of Children in the New York Post-Graduate Medical School and Hospital.

—Dr. J. B. Gibson has resigned the position of superintendent of the Mary Fletcher Hospital, Burlington, Vt. We understand that he is about to remove to New York, having secured a position on the house staff of the New York Eye and Ear Infirmary.

—The first number of the *Maritime Medical News*, published bi-monthly at Halifax, N.S., has made its appearance. It is edited by Drs. D. A. Campbell and A. Morrow of Halifax, J. W. Daniel and L. C. Allison of St. John, N.B., and J. McLeod of Charlottetown, P.E.I. We wish this new venture every success.

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MIXED ANÆSTHESIA.

Obalinski of Cracow speaks highly of anæsthesia induced by a combination of chloroform and cocaine. He maintains that when anæsthesia is induced by chloroform, it can be kept up by the administration of cocaine. The following is the method followed: after giving chloroform for a few minutes, until commencing general anæsthesia is noticed, a quantity of cocaine, varying from three-fourths to one grain, is injected into the tissues that are to be operated on. After the injection of cocaine no further chloroform is administered. After this method of anæsthesia such operations as amputation of the leg and thigh and herniotomy have been performed. It is claimed for this mixed anæsthesia that it is less dangerous than either pure chloroform or a mixture of chloroform and ether. Obalinski followed the above method in twenty-four cases, and always with satisfactory results.

THE BUILDING OF A UNIVERSITY.

In our pages will be found an abstract of a lecture delivered by Sir William Dawson on the "Foundation of McGill University." To our many readers, who are graduates of McGill, this will be pleasant reading. This interesting story shows how abundant is the return from the judicious outlay of money in general and professional education. Few legacies in this country have been more productive of good than that of the Hon. James McGill in founding the university which bears his name. Although McGill owes much to him, still it must be remembered

that there has been a numerous band of generous benefactors since his time.

Obituary.

PROF. HEINRICH VON BAMBERGER, M.D.—The death of Professor Bamberger removes from the Vienna Medical Faculty one of its ablest members. On the death of Oppolzer in 1872, Bamberger was called from Wurzburg to fill his place. In this position he attracted students and practitioners from all parts of the world, being noted for his great diagnostic skill. He was to the last an ardent student. It is only a few weeks since he published an article on ether as a cardiac stimulant.

HENRY B. SANDS, M.D.—The sudden death of Dr. Sands of New York, on the 18th ult., removes from our midst one of the ablest surgeons of the continent. For many years in the capacities of teacher and consultant, he has occupied a leading position among American surgeons. Although not an extensive contributor to surgical literature, yet what he did write was valuable.

J. W. PICKUP, M.D.—We regret to have to record the death of Dr. Pickup of Brockville. Dr. Pickup for a number of years occupied a prominent position as a medical practitioner in Eastern Ontario. He acquired his general and professional education in this city, receiving the degree of M.D. from McGill University in 1867. After his graduation he proceeded to London and Edinburgh, and for some time was a diligent hospital student. He obtained the diploma of the Royal College of Surgeons. On his return to Canada he was appointed Medical Superintendent of the Quebec Lunatic Asylum, a position which he filled with ability. After resigning his position in the asylum he practised for a few years in Pakenham, Ont. About ten years ago he removed to Brockville, where he was in active practice up to the beginning of his fatal illness. Dr. Pickup took a great interest in his profession. He was a good and earnest student, and his loss will be felt not only by his numerous patients, but also by a large circle of professional brethren.

Publisher's Department.

—Dr. Charles H. Merz, the House Physician to University Hospital at Cleveland, Ohio, April 25th, 1887, said: I have made use of *Papine* for some time past, both in hospital and private practice, and find it a most agreeable substitute for morphine and opium. It is the anodyne *par excellence.*

The Internal Treatment of Gonorrhœa.—At a late meeting of the Berlin Medical Society, Dr. Posner stated that although what had been learned about the gonococcus was extremely interesting, it had not given us much that was practical so far as treatment was concerned. Local anti-bacterian treatment had not yet been followed by brilliant results, and to-day we treat gonorrhœa with the old remedies, and combat it especially with the various forms of injections. These injections are not valuable in that they destroy the gonococci, but because they cure the inflammation of the mucous membrane. Internal medicines act beneficially by passing off in the urine and cleaning out the urethra. Dr. Posner speaks highly of Sandal-wood oil, which has such a reputation in France. He has used it much, because he has become convinced that injections, although they work very well in some stages of gonorrhœa, still are not well supported by many patients, and may, indeed, act injuriously. From the speaker's observations he believes that many gonorrhœas which would get well of themselves under a suitable regime are often kept up artificially by injections. He had used the Santal-wood oil in fresh cases, and could state from his own observations that, under all circumstances, it exerted a better influence on the disease than copaiba or any other oleo-resinous balsams. In those complications of gonorrhœa in which we have to cease injections on account of epididymitis, cystitis, prostatitis, etc., this drug is greatly to be recommended. Dr. Posner had repeatedly observed cases of acute catarrh of the bladder, with bloody or turbid urine, improve considerably and the urine become clear after a few doses of the Sandal-wood oil. In old cases of cystitis and prostatitis it was also beneficial and always acted favorably in tenesmus of the bladder and cleared up the urine. In chronic gonorrhœa, less stress was laid upon its beneficial action, but much depended on the purity of the Sandal oil, many qualities of which are found in commerce. The best form he had used was the French preparation known as Santal Midy, put up in elegant little capsules, which were easily taken and well supported. The patient took daily from ten to twelve of these capsules, each of which contains five drops of pure Sandal oil. The German oil in capsules did not agree with the patient, a little hydrochloric acid might be added to the doses, and to improve its taste, a few drops of oil of peppermint. Altogether, according to the speaker's idea, pure Sandal-wood oil was the most efficacious internal remedy at our disposal. These remarks were confirmed by Drs. Casper and Lubinsky, who found it most successful.—(*Deutsche Mediz. Zeitung*, July 1886.)

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Original Communications.

HIGH TEMPERATURE AND GLYCOSURIA IN THE PUERPERAL STATE, THE RESULT OF NERVOUS INFLUENCES.

BY J. C. CAMERON, M.D.,
Professor of Obstetrics, McGill University.

It has long been claimed by obstetricians that nervous influences alone are sufficient at times to cause elevation of temperature in puerperal women. This claim has been stoutly denied by others, who insist that careful search would reveal some other cause underlying the nervous disturbance, which should be properly credited with the rise of temperature. In spite of such objections, it seems now pretty well determined that nervous high temperatures may and do occur. I am not aware, however, that glycosuria traceable directly to nervous excitement has ever been observed in the puerperal state. The following cases are unique, as far as I can ascertain, and suggest many interesting questions physiological as well as pathological :—

CASE I.—A. D., aged 22, II para, was admitted into the Montreal Maternity on 10th October, 1888, in active labor. Her family history is very indefinite. She lost her father and mother in early childhood, was brought up in an English institution for training servants, and sent out to this country. She first menstruated at the age of 15 ; the flow recurred regularly every three weeks, was painless, and lasted usually seven or eight days. Her first child was born in May, 1886 ; there was

considerable post-partum hemorrhage. Shortly afterwards she had an attack of typhoid fever. The history of the present pregnancy is uneventful, except that she suffered a good deal from morning sickness during the first five months, and had gushes of blood every week or two. Her matrimonial relations have not been happy; she was deserted by her husband and had to seek refuge in the Sheltering Home some time before confinement. The authorities of that institution report her as being capricious and violent-tempered, subject to outbreaks of ungovernable passion on slight provocation.

On admission into the Maternity there was no œdema of feet or ankles; the bowels were regular, but micturition was frequent and painful. The urine contained neither albumen nor sugar, and showed a specific gravity of 1012. Labor was short and uneventful, lasting altogether six and one-half hours. There was slight post-partem hemorrhage; a few calcareous plates were found on the maternal face of the placenta. Convalescence went on normally for the first week; but about the seventh day she was noticed to be fretting about something, which turned out subsequently to be an expected letter that failed to arrive. On the morning of the eighth day (Oct. 17th) the temperature was 99.4°; it rose in the evening to 100.6°, and next morning to 102.2°. The urine was examined and showed a trace of sugar. Lactation had then been well established for several days, the tongue was clean, the lochia normal, the urine not increased in amount, and no marked thirst. The diet had been chiefly milk, gruel, broth, and light farinaceous puddings. The temperature rose during waking hours and fell to the normal during sleep, while the pulse did not show any corresponding change. The sugar increased to five per cent. and the specific gravity to 1028. As the temperature subsided the sugar slowly diminished, and by the eighteenth day (Oct. 27) had entirely disappeared. She was then preparing to leave hospital; but on making my daily visit I requested her to remain a few days longer. She thereupon began again to cry and fret, and although her temperature did not rise, sugar reappeared in the urine and persisted for a week. On 2nd November more fretting ran up

the temperature for a couple of days, but sugar did not return, and a few days later she was discharged in fairly good condition. When the temperature ran up and sugar appeared, the flow of milk decreased to return again after the temperature became normal.

In this case we can quite exclude the causes which ordinarily produce rise of temperature in the puerperal state, such as septic trouble, local mischief, disordered lactation, sore nipples, constipation and digestive disorders. The range of temperature was quite remarkable, rising during waking hours and falling during sleep without corresponding variation in pulse, the tongue being meanwhile fairly clean, the appetite moderate, the bowels regular, the general appearance good, and the lochia normal. Aconite, quinine, antipyrin had no appreciable effect; the only remedies which seemed to do any good were potas. bromid. and hypodermic injections of morphia. That the high temperature caused the glycosuria, or that glycosuria caused the elevation of temperature, is not at all probable; both conditions seem rather to have been due to some peculiar nervous influence. Sugar has frequently been found in the urine of puerperal women during lactation. M. Blot was the first to claim that its presence is then physiological. He found it in about half the cases of pregnancy which came under his observation, beginning to appear coincidently with the milk, increasing in quantity as the milk increased, decreasing as it decreased, and finally disappearing when lactation ended. M. Leconte, on the other hand, disputed Blot's conclusions, denied the existence normally of sugar in the urine of nursing women, and said that Blot mistook uric acid for sugar. Beneke and others have confirmed Blot's observations. When sugar is found in the urine of nursing women, it is *lactose*, not *glucose*. In this case sugar was not found till after lactation had been established for several days; it increased as the temperature rose and the milk became scanty, and decreased when the temperature fell and the milk became more abundant. Lactation had evidently nothing to do with the appearance of sugar. That the nervous element r
an important part in producing glycosuria is readil

glance at the accompanying chart. When nervous phenomena began sugar appeared; as they became more intense the sugar increased; when they disappeared the sugar also disappeared. The sugar in this case was *glucose*, not *lactose*; the clinical analyses made at the hospital were confirmed by Dr. R. F. Ruttan in the chemical laboratory of McGill University. It is singular that antipyrin, which is usually so effectual in high temperatures of nervous origin, seemed to be powerless in this case.

DATE.	Time of Obs. A.M.	Time of Obs. P.M.	Temp.	Pulse.	Sp. gr. of Urine.	Percentage of Sugar.
October 10	8		98.6	85	1012	00
"		7	97.8	80		
" 11	8		99.2	80		
		7	98.4	75		
" 12	8		98.4	75		
		7	97.8	73		
" 13	8		98.4	80		
		7	97.6	73		
" 14	8		98.4	80		
		7	97.8	73		
" 15	8		98.4	70		
		7	98.4	72		
" 16	8		98.4	75		
		7	98.4	80		
" 17	8		98.4	73		
		7	98.6	83		
" 18	8		99.4	85	1018	Trace
		7	100.4	105		
" 19	12		103.2	100		
	4		98.6	95		
	9		102.2	105	1020	Small Amount.
		12	101.2	105		
		7	104.2	105		
		9	105.2	105		
		11	102	95		
		12	103.2	95		
" 20	4		103.2	100		
	8		103.2	100		
		1	105.2	102		
		2	104.2	104		
		3	104.4	102		
		5	104.6	100	1020	2%
		6	104.4	110		
		8	104.6	110		
		10	105.4	104		
		11	102.4	100		
		12	103.4	98		
" 21	1		100.2	95		
	2		100.2	95		
	4		98.6	95		
	6		100.2	100		
	8		100.2	106		
	9		103.4	104	1025	5%
		1	104.2	104		
		5	103.6	104		
		9	103.2	103		
		10	104.2	99		
		11	100.6	102		
		12	103.2	100		

October 22	2	.....	100 2	100	.....	.....
	4	.....	102.2	94	.....	.....
	6	.....	103.2	96	.....	.....
	9	.....	101.2	98	.....	.....
	.....	1	101.2	100	1028	1%
	.....	3	101.2	98	.....	.....
	.....	5	100.4	96	.....	.....
	.....	8	101.2	99	.....	.....
	.....	11	100.2	100	.....	.....
" 23	1	.....	100.4	100	.....	.....
	3	.....	100.6	98	.....	.....
	5	.....	98.6	95	.....	.....
	7	.....	98.6	95	.....	.....
	9	.....	98.2	90	.....	.....
	12	.....	99.2	95	1025	3%
	.....	4	100.6	100	.....	.....
	.....	6	101.6	100	.....	.....
" 24	.....	8	102.8	105	.....	.....
	8	.....	98.6	90	1025	Small Amount
" 25	.....	7	102.6	90		
	8	.....	102.2	103	1025	Small Amount
" 26	.....	7	102.2	105		
	8	.....	98.6	73	.....	.....
" 27	.....	7	98.8	73	1022	Trace
	8	.....	98	70	.....	.....
" 28	.....	7	98.6	85	1022	None
	8	.....	97.8	70	.....	.....
" 29	.....	7	98.6	80	1025	Trace
	8	.....	97.8	70	.....	.....
" 30	.....	7	98	73	1025	⅛
	8	.....	98.6	70	.....	.....
" 31	.....	7	98.6	73	1025	⅛
	8	.....	98.6	70	.....	.....
v ember 1	.....	7	97.6	75	1020	1⅛
	8	.....	97.4	70	.....	.....
" 2	.....	7	97.8	73	1022	1⅛
	8	.....	97.6	80	.....	.....
" 3	.....	7	97.6	76	1018	Trace
	8	.....	102.6	100	.....	.....
	.....	7	104.6	110	1015	Trace
" 4	3	.....	102.4	100	.....	.....
	5	.....	101.2	95	.....	.....
	6	.....	100.8	95	1015	None
	8	.....	101.2	85	.....	.....
	.....	5	97 6	70	.....	.....
" 5	8	.....	96.6	75	1018	None

Amount of urine passed daily, 40 to 45 oz.

CASE II.—A. B., aged 37, V para, was admitted into the Montreal Maternity in October, 1888. Her history is decidedly neurotic. Her father and mother are living; the father healthy, but the mother subject to neuralgia and severe headache. She herself has suffered all her life from neuralgia and headache; her children are all epileptic. She began to menstruate at 18, her periods being regular and painless. She married when 22, and subsequently bore four children at full term; no miscarriages. With her *first* child (1863) labor and convalescence were normal. After her *second* (1865) she suffered from procidentia, which required operation. After her *third* (1877) the procidentia was greater and accompanied by obstinate leucorrhœa; a second

perineal operation was performed. With her *fourth* (1885) labor lasted upwards of sixty hours, and was finally terminated with forceps. From the time labor became active till about three days after confinement she was delirious, with a few short lucid intervals. The severe lacerations of both cervix and perineum which resulted were repaired about thirteen months afterwards. All through the present pregnancy she has suffered severely from morning-sickness, and since June has been at times much troubled with œdema of feet and legs. Micturition has latterly been frequent and painful. During the past two months she has had a number of "fits," probably epileptic. The attacks always came early in the morning, before she was out of bed; she was generally found lying on the floor insensible, and consciousness did not usually return for about an hour. She remembered nothing of the attack, but always felt very sore and tired afterwards. During the last three months of pregnancy false labor pains have caused her much discomfort; for weeks she expected confinement daily, and on several occasions spent the night in the labor-ward. These pains were so constant and distressing that she could get very little sleep; during her last week a chloral draught was necessary every night. The urine contained neither sugar nor albumen. Labor proper began December 2nd, about 5 P.M.; the pains were strong and frequent, but labor progressed very slowly. The scar-tissue of the cervix would not yield and the anterior lip capped over the advancing head. Repeated hot vaginal douches and chloral draughts had but little effect. About 5 A.M. the following day nervous symptoms began. She had delusions, chiefly of vision; began to talk and sing, and at times became maniacal, threatening to throw herself out of the window, etc. The pulse ran up to 110, vomiting set in, and the head symptoms became gradually worse. A hypodermic of Liq. Op. Sedativ. and a very hot douche seemed to give some relief; suddenly a violent pain tore the head through the cervix and the child was delivered at 10 A.M. The head symptoms immediately declined and the pulse became quieter. At 5 P.M. 25 oz. of urine were drawn off with a catheter, and on examination it was found to have a spe-

cific gravity of 1015 and to contain six per cent of sugar, but no albumen. A vaginal examination showed the cervix to be deeply lacerated. With the exception of the glycosuria the convalescence was normal, and the patient was discharged on the fifteenth day. The quantity of urine passed daily ranged from forty to fifty ounces, and showed a sp. gr. of 1015 to 1018. Micturition was not frequent, not more than three times daily. There was no elevation of temperature throughout. During the first week she complained of excessive thirst, and occasionally of hunger, palpitation, and tendency to vomit.

Sugar was found present in the following quantities:

December	3rd—6	per cent.
"	4th—8	"
"	5th—6	"
"	6th—3	"
"	7th—2	"
"	8th—2	"
"	9th—1	"
"	10th—A trace.	

A subsequent examination of the urine showed the presence of some albumen, but no sugar. Lactation was established on the third day. It will be noticed that sugar was found in large amount a few hours after the severe nervous strain of labor, and gradually diminished as convalescence progressed.

PROGRESSIVE FACIAL HEMIATROPHY.

By James Stewart, M.D.,
Professor of Pharmacology and Therapeutics, McGill University.

(*Read before the Medico-Chirurgical Society of Montreal.*)

The patient, the subject of the above trouble, is a boy fourteen years of age. It was about two years ago that his parents noticed a difference between the two sides of the face. This difference, they considered, was owing to a swelling of the right side. After some time they consulted their family physician, who told them that the difference was owing to wasting of the left side and not to swelling of the right.

The previous and recent general health of the boy has been excellent. Eighteen months before any change was noticed he

was severely frost-bitten in the left cheek and ear. There is no history obtainable of any wasting affection in any other members of the family. The striking difference between the two sides of the face is illustrated by the accompanying cut. The atrophy,

it will be noticed, affects only those portions of the face innervated by the two lower divisions of the fifth nerve. The skin, the subcutaneous tissues, the muscles and the bones are all atrophied. The muscles have, however, suffered less than any of the other structures. The skin of the affected part is felt to be considerably thinner than on the healthy side. It is also

of a slightly paler hue. The fine hairs covering the face are finer and smoother than those on the corresponding parts of the opposite side. The lower jaw is not only thinner on the left side, but also shorter. There is also a distinct atrophy of the bones of the upper jaw. The teeth appear to be as well developed on the left as on the right side. It is difficult to estimate the degree of pure muscular wasting. It is certainly not very great. The muscles act to voluntary impulses apparently as well on one side as the other. The following is the result of repeated electrical examinations:

The faradic irritability of the facial nerve is normal, and equal on the two sides.

The response to faradization of the muscles of the left side is as well marked as it is on the right (normal side).

The response to galvanization of the left facial nerve is not different from that of the right.

The galvanization of the muscles of the left face show, however, a readier response than do those of the right.

Contraction is obtained on the left from 1½ M A, while it takes 3 M A to bring about a similar contraction on the right.

There is no change in the normal formula, the K S Z < A O Z and A S Z.

There is no increase in the mechanical irritability of the muscles or facial nerve on the left side.

Owing to atrophy of the turbinated bones on the left side, the left nostril is wider than the right.

There is distinct atrophy of the left half of the tongue, more marked towards its anterior part.

The arches of the palate are normally and equally developed. There is no deviation of the uvula.

There is no affection of any of the special senses. He sees, hears, smells and tastes as well on the left side as he does on the right. There is no disturbance of either superficial or deep sensation on the atrophic side.

Repeated measurements with a surface thermometer and a differential calorimeter failed to elicit any difference in the temperature of the two sides of the face. There is no difference to

be detected in the size of the globe of the eye, neither is there any retraction or other change noticeable. The left disc is normal. The secretion of saliva and of tears does not seem to be lessened on the left side. There is no atrophy to be detected elsewhere.

REMARKS.

Until recently it was supposed by some that facial hemiatrophy was caused by disease of the sympathetic, while others looked upon it as due to disease of the fifth nerve. Mendel (*Neurol. Centralblatt*, July 15, 1888) has reported the results of a very thorough examination he made of the fifth nerve in a case of facial hemiatrophy, of many years standing, in a woman. This patient had also atrophy in the region innervated by the left musculo-spiral nerve. She died from phthisis. Her case was first described by Romberg, and more recently by Virchow. The symptoms were those of a typical left facial hemiatrophy. Mendel found all the branches of the left fifth, from their origin to their termination, the seat of a proliferating interstitial neuritis. A marked and similar difference was found in the size of the right and left descending roots of the fifth, and also in the substantia ferruginea, the alleged nucleus of the so-called trophic root of the fifth. The examination in this case proves conclusively that in at least certain cases of facial hemiatrophy we have to do with a neuritis of the fifth. In the case here reported it is very probable that the frostbite was the cause, but whether the first changes are nuclear or peripheral it is impossible to determine. Mendel labors to prove the possibility of a neuritis inducing solely trophic changes without any impairment of motion or sensation. Before the subject is clear, our knowledge must be much extended.

Retrospect Department.

QUARTERLY RETROSPECT OF GYNÆCOLOGY.

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Alexander's Operation for Shortening the Round Ligaments (twenty-three cases), by Dr. Paul F. Mundé of New York, is the subject of a paper of very great interest and value, appearing in the *American Journal of Obstetrics*, November 1888. This operation is of special interest to the writer from the fact that he reported a successful case some three years ago (*Canada Med. and Surg. Journal*), the patient being a lady who had been an invalid for years, and had received no benefit from other forms of treatment. This lady remains perfectly well and active to the present day, her uterus being held in the anteverted position. Several of my friends saw that there was a useful field for this operation in the relief of a class of most intractable cases, and in a short time I had a number of similar cases in view for operation. Suddenly, however, there appeared on the scene a case which put an end for the time to our aspirations. This was the case of a young widowed Englishwoman who had been operated upon unsuccessfully, leaving as the result of the operation an enormous inguinal hernia. The uterus was still retro-displaced, and the hernial blemish rendered this poor woman an object of very great misery. She went the rounds of all our clinics, praying every one she consulted to operate upon her for the relief of the hernia, but the grave character of the case was such that I do not think she succeeded so far as I am aware. The moral effect this case had upon the professional mind was such that many became prejudiced against the procedure, and spoke in society debates of the horrors in the shape of herniæ and fatal results from septic peritonitis which awaited those who were unwary enough to undertake the operation. About this time Dr. Mundé reported six cases, in some of which he failed to find the ligaments, and said he was confident the structures were not there, or that they were so rudi-

mentary and attenuated that it was not possible to make any use of them. After this publication from so well known and able a surgeon there started a hue and cry that the ligaments only existed in women that had borne a large number of children, and who were the subjects of advanced uterine hyperplasia and hypertrophy of the round ligaments. During discussions at the British Gynæcological Society Mr. Lawson Tait and some others spoke against the procedure, saying that it was unscientific in principal and that he would not perform it. In Germany it has been altogether pooh-poohed, being, as it were, altogether too refined and delicate a procedure to suit the heroic tendencies of the average German surgeon—a feeling which is solely the outcome of an utter disregard for human life and a knowledge of their own personal safety. Ventral fixation or hysterorrhaphy has been freely performed in Germany for retro-displacements and prolapse, instead of Alexander's operation. It is, however, well known that the indications for these two operations are separate and distinct. Hysterorrhaphy is applicable to those cases only where old inflammatory remnants have caused the uterus and annexa to be fixed in their displaced position ; and these are the very cases where it is distinctly taught that Alexander's operation is inapplicable. We hear that a certain Western surgeon is doing a large number of Alexander's operations without an anæsthetic, simply using hypodermics of cocaine. This use of cocaine cannot be too strongly condemned, and may be looked upon as a species of surgical gymnastics incompatible with scientific work. In a majority of cases, as Dr. Mundé shows, plastic operations require to be done on the cervix and vagina at the same sitting, and this fact alone would tend to show how absurd the employment of a local anæsthetic would be. In Dr. Mundé's paper he proposes to discuss Alexander's operation under three headings :

1. Can the round ligaments always be easily found, drawn out, and the uterus thus be elevated and anteverted ?

3. In which form of displacement of the uterus is the operation indicated, justifiable, and likely to be followed by complete and lasting relief ?

3. Is the elevation and suspension of the uterus by shortening the round ligaments alone sufficient, and is the result permanent? Or does the latter operation require an additional one on the vagina or pelvic floor to insure a complete and enduring recovery?

In answering the first of these propositions, Dr. Munde states that after several trials and some reflection he has come to the conclusion that his great difficulty in the beginning of his experience was due to a too great observance of detail in the minute anatomy of the part, and that when he learned to cut down boldly from the spine of the pubis, reaching the ring with one stroke, he found no difficulty of discovering the ligaments. This method of Munde's is quite natural, as we can easily understand how a careful and prolonged dissection through the overlying parts would cause the ligament to be pulled to one side by a retractor or forceps, or parts taken up and pulled upon, and in this way made to look like the ligament to an inexperienced operator. "As soon as the ligament on each side has been found, the uterus is anteverted by a repositor. The ligaments are sutured with silk-worm gut into the wound and the latter removed in fourteen days. Before closing the last suture a split-bone drain is inserted into the lower angle of the wound, which is then dressed with sublimate gauze and a spica bandage applied. After the patient assumes the erect posture a Hodge pessary is worn for six months.

Can the uterus always be elevated and anteverted by drawing upon the round ligaments? Dr. Mundé answers this question decidedly in the affirmative, and requires but fifteen minutes to accomplish the operation on each side.

In answer to the second proposition, the author mentions long-standing retroversion or retroflexion especially when associated with descensus. Very old women, he thinks, do not form good subjects for the operation.

In answer to the third proposition, the author is of opinion that whenever the perineum had been destroyed or the pelvic floor injured, involving prolapse of the vaginal walls and uterus, it is advisable to increase the efficiency of Alexander's operation by narrowing the vagina and restoring the perineum.

We think the author right, however, in advising the shortening of the round ligaments first and then operating upon the vagina if it should be found necessary. Dr. Mundé concludes his paper in terms of satisfaction with the results of his experience with the operation, and states that of his 23 cases all were hopeful but two.

A Second Series of One Thousand Consecutive Cases of Abdominal Surgery is the title of a paper by Mr. Lawson Tait, read before the Birmingham and Midland County Branch. Mr. Tait begins by saying that he has succeeded in reducing the death-rate in this his latest series of one thousand cases to 5.3 per cent., as compared with his first series of 9.2 per cent. He attributes this gain in his second series to the omission of the clamp and other imperfections arising from the traditions of his elders, and states that his mortality in the treatment of ovarian and parovarian cystoma has fallen from 8.1 to 3.3 per cent. This, however, does not represent the full gain, because in the first series he had a large number of unfinished operations with a mortality of 50 per cent. These occurred in connection with the treatment of sessile ovarian tumors and imbedded cysts of the broad ligament, the removal of which he now completes, and in this way reduces his mortality. Mr. Tait says he is now in a position to state that there does not exist a cystic tumor of the abdomen which cannot be removed, and that this is also true of solid tumors of a non-malignant character, except of those connected with the spleen or liver.

In his second series he records six unfinished operations in contrast with thirty in his first series, both, however, showing a mortality of 50 per cent. He states that at the post-mortem of these six cases he became convinced that had he screwed up a little more courage he could have reduced this number to three, and accordingly blames himself on his shortcoming. This admission is very kind, and encouraging to the rest of the surgical world; but when Mr. Tait's courage fails, who shall say "go on." There now follow some very admirable statements, which we most certainly feel the truth of and agree with the author upon. "A man who has a large proportion of unfinished opera-

tions is a bad surgeon, worse than one who has a high mortality," and we would add that it shows an unfitness for the work. Besides increased experience and manual dexterity in reducing the number of unfinished operations and death-rate, Mr. Tait adduces as a prominent cause the fact that the mind of the general profession is now rapidly freeing itself from the shackles of the ancient authorities on abdominal surgery, and is opening itself to the new rules of progress. Mr. Tait here states that it is only within his own particular little halo (Birmingham and the Midland district) that the surgeons are not in this respect a disgrace to our art, and that the day for plain speaking has arrived. Surgeons should not be permitted to treat a pelvic abscess with a pessary any more than a mammary abscess with a splint, instances of which nonsense, he states, he experiences every week. If this sort of thing obtains outside of Birmingham, it is certainly a disgrace to the profession in England, as Mr. Tait says, but we do not think it does any more than we do in regard to our own country, where such a thing could not possibly happen owing to the manner in which our men are taught.

In speaking of the advisability of operating early, instead of following Sir Spencer Wells' advice to keep the patient on her feet as long as you can, Mr. Tait says that it is far better to open the abdomen a few times unnecessarily than that we should deliberately limit the powers of our art in this foolish way. Mr. Tait records fifty-three exploratory incisions in his second series as against ninety-four in his first. He says that these incisions take the place of tappings, which latter he never practices. A very remarkable result often follows these exploratory incisions when drainage has been employed; ascetic fluid has disappeared permanently and tumors of the liver, spleen, and of other kinds, have also disappeared and the patients cured.

In the group of operations for chronic inflammatory disease of the uterine appendages, Mr. Tait records a mortality of 3.4 per cent. (263 cases) as against a mortality of five per cent. in his former series, a diminution largely due, he says, to increased experience. In this group there was not a single case of incomplete operation, and when we remember that these operations

are more difficult, and should have a higher mortality than the mere removal of tumors, it speaks much for Mr. Tait's dexterity. In speaking of the ultimate result following these appendage operations, Mr. Tait pays a high tribute to Dr. Arthur Johnston of Danville, Ky., for having discovered that there is a large nerve trunk entering (or leaving) the cornu of the uterus, in the angle between the round ligament and the tube, which seems to have a powerful ageney in the process of menstruation. This nerve should be secured in the ligature during the operation. Mr. Tait next touches upon the treatment of uterine myoma by electricity, and has been rather disturbed of late by the receipt of a pamphlet entitled " Electricity *versus* Tait." The author's views on this subject are well known, but are well worth reading in the present paper. As a contrast to the electrical method of treatment of myoma uteri he submits a group of 148 cases of removal of the appendages with three deaths, a mortality of 2.03 per cent. as against 99 in former series with a mortality of 7 per cent.

The next group is that of 88 hysterectomies, with a mortality of 11.3 per cent. as against 54 cases with a mortality of 35.7 per cent. in his first series. Mr. Tait feels very keenly upon this point of high mortality in his first series, and comments bitterly upon the conduct of Dr. Keith in refusing to allow him to witness his (Keith's) method, the secret of which consisted in ligaturing the broad ligaments separately and stripping them off the uterus, thus preventing occlusion of the rectum by taking off strain. Tait has now had 31 consecutive recoveries following hysterectomy, and thinks that he will ere long bring the mortality down to that of ovariotomy.

Mr. Tait has operated 26 times in cases of suppurative peritonitis and saved 22 patients, and he therefore pleads strongly for the early operative treatment. We do not keep pus long in the pleura, why should we allow it to remain in the peritoneum. Mr. Tait, however, speaks with bated breath concerning abdominal section in the treatment of puerperal peritonitis. He has operated four times with only one recovery, but says he *nearly* had two other recoveries, and had he had twelve hours of a start

he would have reduced his mortality from 75 per cent. to 25. We think this remark of Mr. Tait's a most valuable one, and involves a very grave lesson to the physician accoucheur. If it should set him thinking, he may come to the belief that it will be better to put medicines aside and place the whole responsibility upon the surgeon; but let him see that he does so early and not wait until the only satisfaction he can obtain will be in the form of moral support. Mr. Tait even goes so far, in commenting upon this subject, as to advise the removal of the uterus. The inflammatory mischief is so often in the uterus itself, and the chances of recovery are so fractional, that any kind of effort seems legitimate.

Mr. Tait concludes his essay with his views in regard to removal of the pregnant uterus by abdominal section when it was impossible to deliver the child through the natural passages. He states that he has performed the old Cæsarian section three times in his life, and that the mother died in every case. He has also done one operation according to the Sänger method with a fatal result. These fatalities so impressed him that he attributed their cause to the "puerperal condition," but this he now acknowledges to be incorrect, as he has lately performed four operations on the principle laid down by Porro, with the happy result of recovery in every case. Mr. Tait, however, has altered the method so much that it is not, in detail of performance, a Porro, but only so in principle—*i.e.*, the removal of the uterus to save the mother from the danger of suppurative metritis and the possibility of having the same trouble over again. The author calls his new method "amputation of the pregnant uterus," and is performed as follows: An incision is made large enough to admit the hand; a rubber drainage-tube is stopped over the fundus and brought down so as to encircle the cervix. This tube is tied with a single hitch knot sufficiently tight to arrest the circulation. The uterus is then opened and the child withdrawn, followed by removal of placenta. The uterus is now brought out through the abdominal wound, the ligature tightened afresh, and knitting needles passed through the rubber tube and cervix. The uterus is next amputated about three-quarters of

an inch above the needles ; the wound is closed in the usual way and the stump dressed with perchloride of iron. Mr. Tait says it takes less time to perform the operation than it does to describe it, and that any inexperienced young practitioner can perform it successfully if the patient has not been mauled about by ineffectual attempts to deliver, and that its mortality will not exceed that of ovariotomy.

The Mortality of Abdominal Section.—At a late meeting of the Royal Medical and Chirurgical Society, Mr. W. A. Meredith (*Lancet*, October 27, 1888) read a paper, the purpose of which was to draw attention to certain points affecting the present death-rate after abdominal section, and with this view operations for ovarian growths were chosen, as being to some extent representative of the entire subject under consideration. As a basis for the inquiry, the results of the author's own work in this connection, amounting to 126 operations, were examined with regard to the chief causes influencing the mortality, special reference being made to the ten deaths which occurred in the series of 104 completed ovariotomies. All the operations were performed with strict antiseptic precautions, including the use of the carbolized spray. He was now less inclined than formerly to look upon the latter as an absolute essential to the safeguards of antiseptic abdominal surgery, but he still considered it valuable as the most convenient and effectual means of antiseptic irrigation at our disposal when dealing with the peritoneal cavity. Both ovaries were removed in seventeen cases, two of which terminated fatally, but in neither instance was the result in any way attributable to the removal of the second ovary. Complete enucleation was performed in five cases, all successful, the resulting rent in the broad ligament being closed by means of a continuous silk suture. He advocated the use of the drainage tube in all cases of ruptured or inflamed cysts, in any case in which irritating or septic fluid had escaped into the peritoneum, in all operations complicated by serious injury to bowel or urinary bladder, in every instance in which washing out had been resorted to, and in all cases of severe operation in middle-aged or elderly women. For washing out the peritoneum, where

necessary, he advocated the use of plain, recently boiled water, cooled as required by the addition of a saturated solution of boric acid. Discussing the mortality, he was inclined to believe that in a large series of cases the average death-rate would never be less than five or six per cent. Of the ten deaths in his series, two were from septicæmia, one from intestinal obstruction, one from hemorrhage, one from dysenteric diarrhæa, two from chest complications, and three from exhaustion; three of these deaths were from preventable causes. Twelve successful operations for the removal of the diseased uterine appendages were next reviewed. In seven patients, in whom both appendages were removed, complete arrest of menstruation followed. He had found that in cases of chronic ovarian mischief about 90 per cent. were the subjects of obstinate constipation, and in them tonic purgative treatment, by lessening pelvic congestion and preventing the formation of scybala, was followed by marked relief of symptoms. Included in a series of ten exploratory operations were two incomplete ovariotomies. Both patients had been tapped, and the death of one was directly due to the difficulties encountered in the attempt to separate universal adhesions which had resulted from this treatment. In conclusion, it was shown that the increased success of abdominal section for ovarian disease during the past ten years was chiefly attributable to the diminution in the number of deaths from septicæmia. For purposes of comparison he took three successive groups of operations, which represented three separate periods during the last twelve years, and gave their average death-rate from septicæmia alone. In 100 consecutive cases taken from Sir Spencer Wells' work, when the clamp was used and before the employment of antiseptics, the mortality was ten, or one to every ten patients. In 150 cases recorded by Mr. Thornton in the sixty-fourth volume of the *Medical and Chirurgical Transactions*, which were treated antiseptically and with intra-peritoneal ligature of the pedicle, there were five deaths, or one to every thirty patients. In his own series of 104 cases there were two deaths, or one to every fifty-two patients. The chief factors which had contributed to this success, he thought, were as follows: (1) The general

adoption of the intra-peritoneal treatment of the ovarian pedicle ; (2) the application of the antiseptic system to abdominal surgery ; (3) the gradual abandonment of the practice of tapping abdominal cysts ; (4) the increase in our knowledge respecting the proper use and management of the drainage tube ; (5) the recent introduction of the plan of freely washing out the peritoneal cavity in cases complicated by the extravasation of blood or other fluid.

Dysmenorrhœa, Rapid Dilatation of the Cervix.—This is a favorite subject with Dr. Goodell in his clinical lectures. In my experience it is no doubt a most satisfactory operation in many cases of severe dysmenorrhœa. To obtain good results and safety it has, however, to be properly done, and this means experience. I am in the habit of combining with dilatation some cutting whenever the tension upon the instrument becomes extreme. I always exsect the posterior segment of the cervical wall at the same time.

" The patient is 25 years of age. Puberty began at 14, and ever since she has has had severe and obstinate dysmenorrhœa. She comes to us now not so much for the pain during menstruation as for pain produced by coition, a condition to which we apply the term dyspareunia. When a woman who has never borne children complains of dysmenorrhœa, the cause in the great majority of cases is anteflexion. The natural condition of the womb, as you know, is anteflexion. Retroversion and retroflexion, on the other hand, are usually the result of lack of involution after labor. The uterus is too heavy and falls backward, and we have, according to the degree of plasticity of the organ, retroversion or retroflexion. If the organ is easily bent, we have a flexion, bnt if the tissue is firm and the ligaments somewhat relaxed, there will be retroversion. As I have told you, this patient has had dysmenorrhœa since puberty, but since her marriage, three years ago, the pain has become much worse. The fact of painful menstruations indicates that she has one or two conditions, or possibly both of them. There is either an exaggerated anteflexion or stenosis of the cervical canal, or both. If the bend in the neck of the womb is great, no fluid can escape. The blood

collects in the cavity of the womb, distending it, and at last the canal is straightened and the fluid escapes with a gush. Sometimes the occurrences of this sudden escape of blood is not recognized by the patient, but on close inquiry she will tell you that the pain goes on increasing until it reaches its acme, when there will be a sudden diminution in its intensity, when it will again gradually increase. There is often some difficulty in deciding whether or not a patient has stenosis by angulation, for during the intermenstrual period the sound may readily pass, but at the time of the period the mucous membrane becomes swollen and the canal is occluded. In married women who do not become pregnant there is superadded the congestions from coition. The accumulation of fluid in the cavity in the uterus at the menstrual periods leads to hypertrophy of the uterine muscle, so that we have the monthly congestions and the engorgements from coition acting on an organ already enlarged. As a result, we have a subacute form of endometritis, and the ovaries also become congested and tender. The cervix, which ordinarily is very insensitive, will at times become the seat of exquisite sensibility. This, in my experience, is most frequently seen in those who are employing preventive measures to avoid conception. This woman is anxious to have children, and it is evident that her condition is not the result of any evil practice. Anteflexion of itself calls for no treatment, but when it causes dysmenorrhœa, and when the pain is not due to irritability of the womb, the anteflexion should be relieved.

"The patient has now been placed thoroughly under the influence of ether. There is a decided anteflexion, and the sound gives a measurement of three inches. The best method for the treatment of this condition is dilatation. This is much better than the cutting operation, which consists in slitting up the posterior lip of the cervix to the vaginal junction and then introducing a knife within the canal and cutting the little spur of tissue that remains. This is not so successful as dilatation, and is far more dangerous. Many lives have been sacrificed by the bloody operation, as it has been termed. I have performed the operation of dilatation in 317 cases and have never had any alarming

symptoms. In a few instances there has been a slight metritis, with some involvement of the peri uterine peritoneum. I shall now proceed to the performance of the operation in this case. We employ thorough antisepsis throughout the operation. The vagina is first cleansed with a 1 to 1000 solution of corrosive sublimate. After introducing a speculum, I catch the cervix with a tenaculum and hold it while I introduce Ellinger's dilator, and then reverse it. This readily passes. When it does not enter at first, introduce it as far as it will go and separate the blades. Then close it and introduce it a little further, and in this way you can soon tunnel your way through the canal. Care should be taken to see that there are shoulders on the dilator to prevent it from entering too deeply into the cavity of the womb. The shoulders should be two inches from the extremity of the instrument, and there should be at least half an inch between the ends of the dilator and the fundus of the womb. If the blades were in contact with the fundus of the womb, they would be liable to tear the tissue as they were opened and cause serious results. Having the dilator properly introduced, I gradually separate the blades, not using too much force at once. I have torn the cervix while dilating. The tear did not give any trouble, but there was a certain amount of hemorrhage. This was controlled by the application of Monsel's solution and the introduction of a tampon. I have now dilated as far as can be done with this instrument. I next employ a much more powerful dilator, the blades of which have no tendency to feather. Having slowly dilated to one inch and a quarter, I remove the ether, and allow the instrument to remain until the patient begins to show that she feels it. Before the beginning of this operation, I always direct that an opium suppository be introduced into the rectum, so that it will have begun to act by the time that the effect of the anæsthetic has passed off. Before removing the dilator the vagina is again thoroughly cleansed with the corrosive sublimate solution, and some of it is allowed to enter the cavity of the uterus. This is perfectly safe when the os is in the patulous condition. The dilator is now withdrawn and a ten-grain suppository of iodoform is slipped into the vagina. I can confidently recommend this

operation to you in such cases as this. Occasionally it is necessary to repeat the dilation, but one operation almost always gives decided, if not complete, relief.—*Dr. Goodell, Clin. Lect.*

Pelvic Inflammations.—The management of pelvic inflammations naturally divides itself into that for the acute or immediate stage, and that for the chronic or remote form—the latter embracing the treatment of the residues or remnants of the inflammatory process. The therapy of acute inflammations is not considered as within the scope of this review; nevertheless, it may be remarked that it is important to prevent or modify the attacks, as far as possible, by the thorough use of antiseptics during labor or after delivery. It may be laid down as essential that the hands of the accoucheur should be absolutely sterilized to begin with; that in instrumental labors, or in any case where it has been necessary to invade the uterus either with hands or instruments to effect delivery, the womb should be irrigated with an antiseptic liquid that is an undoubted germicide; and that this process should be repeated in any such case where the temperature rises above 100°F., with a tendency to steadily increase, sufficiently often to keep it free from sepsis. Under proper antiseptic precautions in midwifery, pelvic inflammations will often be prevented or their ravages diminished. When a woman does not effect a "good getting up" after delivery, and she complains of deep-seated pelvic pains, especially if associated with a slight rise in temperature which continues for days or weeks, the suspicion is very strong that there are exudations lurking somewhere in the pelvic cavity, for which a careful search should be made. If they should be discovered, appropriate treatment with a view to promote their absorption should be instituted. We have usually obtained benefit from a careful tamponment of the vagina, medicating the tampons according to the nature of the case. This furnishes support, rest to the parts, and elastic pressure, all of which greatly facilitate absorption of the exudate and tend to relieve pain. It is a valuable adjunct in the management of all the residues of pelvic inflammations in the preparatory or initial stage of treatment, and sometimes seems to effect a complete cure, rendering the appeal to more radical measures un-

necessary. The principle of elevating the uterus and its appendages out of the lower pelvis, releasing them to a considerable extent from impaction and thereby promoting nutritive changes, is undoubtedly a correct one; but its usefulness is restricted within certain limitations. Its contra-indications appear to be fever, subacute or chronic peritonitis, strong adhesions and abscesses. Its use should never be persisted in when it causes pain, but when it affords relief, its employment is pretty certain to be followed by good results. In doubtful cases it would be well to proceed cautiously at first until its efficacy is tested, after which, if favorably indicated, we may go ahead with confidence. The residues due to laceration of the cervix or other portions of the utero-vaginal tract usually require surgical measures for their cure. One of the important benefits of trachelorrhaphy is found in its prevention of, or the relief it affords from, those secondary conditions liable to follow in the train of an unrepaired cervical rent—either tissue changes, reflex neuroses, or an extension of the inflammatory products into other organs or tissues. Hence, in making the operation, it is expedient to excise all cicatricial tissue and hypertrophic thickening of the everted cervix. In displaced uteri, caused by inflammatory remnants, a reasonable effort to free the organs from their moorings and restore them to their proper positions may be made, but it should not be attempted with the uterine sound or other intra-uterine redresser. The sound has little or no place in the management of these cases, either for purposes of diagnosis or treatment. Pessaries, too, are of no avail, and may do positive harm if resorted to before the uterus is made to move freely in the pelvic cavity. If this mobility can be re-established through any agency free from harm or danger, then a suitable pessary may prove serviceable. The formation of pus in the pelvic cavity is not an infrequent ending to either acute or chronic inflammation, and when established, furnishes an interesting field for the surgeon. When large abscesses form as the result of acute inflammations, it is not difficult to decide upon the proper course to pursue; but such is not always the case when old residues finally break down into pus sacs. In the former the symptoms are urgent, some-

thing must be done, and that quickly, or disaster may result. Moreover, the location of the abscess is not, as a general rule, difficult to define, nor the pus itself out of easy reach. Not so in the so-called chronic abscesses, especially where the pus centres are small, as they frequently are when they originate in the hardened masses of exudation—generally remote from the surface—and, perhaps, surrounded by thickened walls or further obscured by overlying structures. These conditions not only increase the difficulties of diagnosis, but the abscess is not as easily evacuated. It may be justifiable in doubtful cases, but where yet there is a strong suspicion of pus, to clear up the doubt by exploratory puncture; if pus is thereby revealed, the opening can be enlarged by divulsion with a steel dilator, the contents evacuated, the cavity antiseptically irrigated, and a drainage tube inserted. If, under incision and drainage, the cavity does not close promptly, or if it secretes unhealthy pus, it should be washed out frequently with antiseptic solutions; or it may be packed with iodoform gauze. Finally, if it remain latent very long, and its pyogenic surface is converted into cicatricial membrane, the curette may be demanded before a cure is effected. Pus is an enemy for which diligent search should be made, unleashed when found, and the case further treated in accordance with the modern surgical rules applicable. It may be that the abscess can best be treated through the vagina, and the opening and drainage conducted through its walls. This will most likely be the case in low-down pus collections; but if it is impossible, or even very difficult, to reach the abscess through this route, then it may best be treated by abdominal section and drainage, and the careful stitching of the abscess walls to the margins of the incision. In conclusion he would draw attention to (1) the importance of early attention to even the *soi-disant* minor pelvic inflmmations; (2) the suggestion of a simpler classification of pelvic inflammations; (3) the influence inflammatory remnants exert upon the health of women; (4) the great value, *inter alia*, of support and pressure in their management; (5) the thorough trial of all intermediate therapeusis before (6) the final resort to surgical relief by abdominal section.—*Dr. W. W. Potter, Buffalo.*

In this article Dr. Potter does not speak definitely of the most important part of the treatment of chronic pelvic inflammations—enforced rest in bed. Without this we can get nothing but disappointment. Bandl, in his writings upon this subject, has probably done more in a scientific way than any living man, and his observations should be studied by all.

Ovarian Tumors.—Dr. Poupinel has published a series of observations made in the histological laboratory of the College de France on a large number of ovarian cysts. He has found that ovarian cysts may exhibit every grade between the pure dermoid and the pure mucoid multilocular, or common ovarian cyst. These grades constitute what he terms "mixed ovarian tumors." The epithelial lining of the purest mucoid cyst is extremely variable, it may be cylindrical, cubical, goblet-celled, metatypical, or even ciliated. He has seen three cases where the epithelium was entirely ciliated. [He says nothing throughout his paper of papillomatous or hilum-cysts. Ciliated epithelium is strongly suggestive of an origin from the Wolffian tubules which are found in the hilum and which stray sparingly into the parenchyma in our species; hence, in the reporter's opinion, the occasional presence of papillomatous amidst mucoid or glandular cysts.] Sometimes the epithelium is mixed. In mixed ovarian tumors the epithelial lining of the cysts may be yet more varied, that is, cubical, goblet-celled, polymorphous, ciliated, stratified, or truly epidermic. In some cases the cyst is lined with skin bearing hair and sebaceous and sudoriparous glands, partly with uniform or polymorphous epithelium. Lastly, in dermoid cysts the lining of the cyst is, as a rule, purely cutaneous. Sometimes it is mixed with what appears to be true mucous membrane. The stroma or intercystic material in multilocular cysts is, as a rule, entirely made up of young, perfect, or myxomatous connective tissue. Both bone and cartilage may develop in the stroma. In the mixed ovarian tumors osseous and enchondromatous deposits in the stroma are not so closely connected with the neighboring secondary cysts as are similar formations in pure dermoid tumors. Lastly, the stroma may contain plain or striated muscle-cells or nerve-tissue (teratoma of Virchow, Le-

bert's third variety of ovarian cyst). All the above-named conditions may be bilateral. Brodowsky has found ciliated epithelium in a pair of ovarian cysts. On the other hand, one ovary may form a mixed cyst, the opposite a mucoid or dermoid cyst. Dermoid cysts may become cancerous or even sarcomatous or colloid. Thus he endeavors to establish, by demonstrating gradations, the identity (in origin at least) of dermoid cysts and common ovarian multilocular tumors. The former are cysts lined internally with skin, which may bear epidermic appendages and glands found in connection with normal skin. The common multilocular cyst is lined with what must be considered, to all intents and purposes, as mucous membrane, which secretes a mucoid fluid, and which may bear involutions representing glands. In other characters the two varieties of tumor are similar. Thus mucoid cysts may give rise to so-called secondary deposits. Evidence has been brought forward to prove that dermoid cysts may do the same. In Frankel's two cases there was probably rupture of the ovarian cyst and implantation of dermoid elements on the peritoneum. Kolaczek's case is not absolutely clear; the surface of the ovarian cyst was smooth and entire, quite different from the small piliferous cysts found in the peritoneum. Moore's case (*Trans. of the Pathological Soc.*) is of high interest. There was evidence of rupture of the main cyst, or the cyst may have developed pedunculated secondary growths, the pedicles afterwards undergoing atrophy. Moore believed that rupture of the main cyst explained the secondary deposits. ["The rupture of an ordinary ovarian cyst usually causes a fatal peritonitis; but a dry cyst, such as these, would produce mischief in its bursting, which might be limited and consistent with recovery. Such peritonitis had occurred in the present case." Thus wrote Moore in 1866. Further experience has proved that rupture of an "ordinary ovarian cyst" may only give rise to trifling symptoms. The accident may also cause dissemination of glandular growths, or of secondary cysts. In this respect the multilocular may resemble the dermoid ovarian tumor, for in both forms rupture may disseminate the intracystic growths; but whether true metastasis occurs in either is doubtful. Again, in both forms, I believe,

exogenous cysts, or secondary cysts which protrude from the main wall of the tumor, may become detached and adhere to omentum or intestine.] Dr. Poupinel finds that the mucous or common multilocular cysts are most frequent in adult life (from 35 to 45). The mixed forms appear between the ages of 15 and 25. All three types are said by Dr. Poupinel to be rare in childhood, but, relatively, dermoid tumors are then common. [Indeed, nearly all the ovarian cysts which have been removed from patients under puberty have proved to be dermoid. In the fœtus, ovarian cysts may be papillomatous, or even malignant. Winckel figures in his text-book an adenomatous ovarian tumor, and simple follicular cysts are very common in the fœtus.] Dr. Poupinel rejects learned hypotheses on the origin of dermoid cysts. They are not more mysterious in their nature than common multilocular cysts; the former develop skin, the latter mucous membrane, and mucous membrane is as wonderful as cutis and epidermis.

Prolapsus Uteri.—(Dr. C. Cohn in the *Ztsch. f. Gyn.*)—1. The continuous catgut suture gives the securest guarantee of primary union, in addition to relative ease and rapidity in the performance of the operations. The superficial union of the wound obtainable by this means gives a firm cicatrix which is favorable to a permanent result. 2. Colpo-perinæorrhaphy may be the means of permanently curing even extensive conditions of prolapse. Hegar's method answers fully the demands which may be made upon it. The reasons for failure, as regards complete healing, in nearly half of the author's cases are: (*a*) A portion of the cases which are referred to recurrence of the cause of operation are not recurrences in the proper sense of the term, but simply cases in which healing did not take place; (*b*) a portion of the recurrences are attributable to incompleteness of the operation, only anterior colporrhaphy having been done; (*c*) the other recurrences are due to such factors as severe parturition, quick repetition of pregnancy, and particular anatomical conditions of the posterior vaginal wall. In order to obtain permanent results from operations of this character it is desirable in conditions of prolapse to operate upon the posterior vaginal wall

at the earliest possible moment. Narrow the vagina as much as possible throughout its entire extent, by the high operation of posterior colporrhaphy. Make as high a perineum as possible, bringing forward the narrow introitus. The higher the perineum the firmer the pelvic floor. The more the vagina is drawn forward the more favorable will be the chances of permanent recovery.

Ventral Fixation for Uterine Displacement.—Mrs. ——, 33 years old; married eight years previously; has had three normal labors; since her seventh year, has menstruated profusely for four or five days once in four weeks. She has suffered for five years from continuous pain in the sacral and hypogastric region, which must be due to retroflexion of the uterus and perimetritis. The pain is relieved temporarily by a pessary; but the latter invariably causes a recurrence of pelvic inflammation, and she has been compelled to take to her bed recently fifteen times on this account. Consequently she could no longer endure a pessary. Every attempt caused unbearable pain, and the uterus was bent so sharply posteriorly that the fundus lay deep between the cervix and the rectum. Ventral fixation was performed by Leopold's method, without removing the tubes or ovaries. The patient made an excellent recovery in every way, with complete relief from all her suffering, and she was once more able to perform all her domestic duties. An examination made fifteen months later showed that the uterus was erect, with the fundus firmly attached to the abdomiual wall, but painless and quite movable. It did not interfere with the bladder or other organs, and menstruation was perfectly normal. None of the complaints caused by the retroflexion had returned.

Mrs. ——, 46 years old; widow for two years; had been married twenty years previous, and given birth twice in normal labor. The patient had complained for a long time of continuous and severe sacral pains, which incapacitated her for work. The uterus was of a normal size, retroflected and movable. The left parametrium was very sensitive. All attempts to retain the uterus in a normal position failed. In an examination under ether, the uterus could be raised to the abdominal wall by the

sound. In doing so, false membranes between the uterus and rectum were put on the stretch, and could be easily felt from the rectum. When the uterus was drawn downward with the bullet forceps, the right utero-sacral ligament was felt thickened, per rectum, the right ovary the size of a plum, somewhat movable, and the left adnexa matted down in the immediate vicinity and not to be distinctly distinguished from each other. Ventral fixation was decided upon. After opening the abdominal cavity, the left tube was found enlarged to the size of the finger and its outer extremity closed. The adhesions were carefully separated by the fingers, and the tube with the ovary was removed. The right tube and ovary appeared microscopically normal, and were left behind. The uterus was then freed from its adhesions to the rectum and fastened to the anterior abdominal wall. The patient made a good recovery, and began to sit up on the fourteenth day after the operation. But from this time on she complained of the sacral pain, from which she had been free after the operation. Seven months later, an examination showed that the uterus was well fixed anteriorly, and the pelvic organs free from sensitiveness. The general condition of the patient had improved very much, and she was able to attend to her housework. The sacral pain was better, but still present. This case is an instructive one, as it shows that merely anteverting the uterus does not necessarily relieve all the suffering. The history of pelvic inflammation probably explains the persistent pain. The same thing has been observed after castration ; and Hegar has directed our attention to the presence of small nodules of inflammatory exudation which will escape detection on examination and yet press on nerve-trunks or filaments in such a manner as to cause severe pain. Such nodules or exudations will, of course, persist after a laparotomy, and then the pain will continue.

Miss ——, aged 34, had a severe fall at the age of 15. The uterus was retroverted, and replaced occasionally without using any support to that organ. Her chief symptoms were profuse menstruation every three weeks, with extreme dysmenorrhœa and violent congestive headache. Her mind is somewhat affected at these times. She easily forgets what has taken place, and is

much bewildered and sometimes hysterical. She is able to walk but a short distance, and has continuous pelvic pain, especially on the right side. On examination, the uterus was found sharply retroflected, and there were two exquisitely sensitive bodies, the size of plums, low down in the cul-de-sac of Douglas. These were the ovaries, the right being larger than the left. Any attempt to replace the uterus or introduce the sound caused intense suffering, and spasms of an hysterical character. No kind of pessary or ordinary tampon in the vagina could be endured. A year of careful local and general treatment was spent in vain hope of allaying the sensitiveness of the ovaries and uterus. Ventral fixation of the uterus, if practicable, was the only resource left. Accordingly laparotomy was performed, the abdominal incision being two and a half inches long, separated the uterus, tubes and ovaries from their adhesions posteriorly, stitched the uterus to the anterior abdominal wall, and removed the tubes and ovaries. The right ovary was much enlarged and showed some small cysts of varying size in its substance. The patient was a little chilled in her bath the day of the operation, and had a sharp attack of neuralgia that night, with slight increase of temperature. This soon subsided, and since the second day the pulse and temperature have been nearly normal. The dressing was removed on the twelfth day. The wound had healed apparently by primary adhesion, was perfectly dry, and the cotton showed no stain whatever, except a little blood absorbed when first applied.—*Dr. G. R. Southwick in N. E. Med. Gazette.*

A very interesting discussion has recently taken place at the New York Academy of Medicine on this important subject. Dr. C. C. Lee was the reader of the paper. He showed that Dr. Howard Kelly of Philadelphia had given the name hysteroraphy to the process of sewing the displaced uterus to the anterior wall of the abdomen.

Dr. Lee gave the histories of six cases in which he had performed primary hysterorrhaphy. The operation had been done so frequently, secondary to laparotomy for other purposes, that he did not refer to his experience with such cases. In all the six

there was retroversion of the uterus, with strong adhesions and attendant symptoms which all other means had failed to relieve. Laparotomy was performed and the adhesions broken up, although usually with much difficulty, and the uterus was fastened by suture to the anterior abdominal wall. In one case the uterine appendages had previously been removed, but the patient continued to menstruate and to suffer severe pain. Finally he again performed laparotomy, broke up perimetritic adhesions fastened the uterus to the abdominal wall, and there had been relief, although the final result could not be stated, the operation having been done the present month. In one instance the operation failed to give relief. Although the operation was sometimes difficult of performance, yet it was certainly less dangerous than extirpation of the uterine appendages or of a morbid growth, and it often gave relief from severe symptoms. It was indicated in retroflexion of the uterus with fixation, great suffering which finally ruined the health, where pessaries were not borne, and if borne had no effect. Unless it should be supplanted by the massage and gymnastics practised by Brandt, hysterorrhaphy would be a great blessing to many patients. He had not practised Brandt's method, but he had felt sceptical regarding its claims. Regarding the relative value of hysterorrhaphy and Alexander's operation he thought it useless to speak, for they were indicated in different classes of cases. If there were no adhesions, no fixation of the displaced uterus, even the most enterprising laparotomist would hesitate to advise hysterorrhaphy, while it had been claimed that in only such cases was Alexander's operation to be performed. Regarding the steps in the operation, Dr. Lee said that after a number of experiments he had concluded that the sutures should not be passed through the fundus uteri, which was often excessively vascular, but through the proximal end or edge of the broad ligament, so as to encircle the round ligament, and above, not only through the parietal peritoneum, but through the supra-peritoneal fat; for otherwise they were liable to tear through and allow the womb to fall back again. While silkworm gut answered well if previously soaked to make it flexible, the very best material was fine Chinese twisted silk rendered aseptic.

Catgut was inadmissible from liability to rapid absorption, and silver wire was much more likely to tear the broad ligaments. The aim was to have the ligature remain and become encysted. In separating the adhesions the fingers alone were to be used, and the adhesions about the ends of the broad ligament were to be torn through first, and when the uterus was drawn up one could better distinguish the utero-sacral ligaments from adhesions. The operation was only to be done with all antiseptic precautions. The subsequent treatment was like that in other laparotomies. Thus far he believed no death from hysterorrhaphy had been recorded.

Faradization in Hysterical Spasm.—The following is an instance in which strong cutaneous faradization succeeded at the first attempt, in a form of hysterical spasm: M. S., female, aged 18. Family history—father suffering from "miner's disease," mother hepatic. Self—bilio-nervous temperament, never really ill. Lately anæmic. Catamenia regular and painless. Four months ago had a great fright. A fortnight ago began to suffer from clonic spasm of the muscles of the right forearm; leg and face unaffected. The movements ceased only during sleep. Was told she was suffering from chorea, and came to town to be treated. On examination, her appearance and history of ovarian hyperæsthesia, globus, and occasional aphonia, with other symptoms, pointed to the hysterical nature of the seizure. Having a lively recollection of a precisely similar case which I had seen under Prof. Ferrier, at London, and by him designated "crank-handle spasm," I adopted the same treatment as was practised on that occasion, with the same signal and instantaneous success. With one electrode upon the supinator longus, a strong faradic current was applied with the dry faradic brush to the surface of the forearm. After one or two applications, and in less than a minute, the spasmodic movements ceased. Complete control was re-established over the limb, and patient was able to write home without the least tremor of the hand. She was placed upon an iron and quinine tonic, ordered rest and change of air, etc. A week later she came again, and there had not been any recurrence. I was led, of course, to the use of strong cutaneous

faradization by the recollection of its success in Prof. Ferrier's similar case. The *modus operandi*, probably, was that the strong irritation exercised an inhibitory effect directly on the motor stimulation, which was the cause of the seizures.—*Dr. J. W. Springthorp in Australian Med. Journal.*

Endometritis.—Endometritis was formerly regarded as the local expression of a diathesis, and was to be combated by constitutional measures only. Every endometritis, however, whether simple or fungous, cervical or corporal, superficial or profound, is infectious in character. The recognition of these facts naturally conducts us to a rational treatment, the destruction of the infective material and the cure of the lesions determined by it. The appalling disasters that inspired our predecessors with a not unwholesome fear of even the slightest surgical interference with the cervix are easily explained by the infectious field of operation. Hence, our first care must be to prepare the patient—the vagina must be rendered aseptic. I have long insisted on this, and here, if possible, asepsis is more imperative than any other surgical procedure—it should be the inviolable rule. The uterine cavity is closed or nearly so, the cervical canal permitting but difficult access from without and imperfect escape of secretions from within. These secretions accumulate, and when they become purulent the uterine cavity may not be inaptly compared to an abscess with an insufficient fistulous tract. This comparison reveals the necessity of immediate intervention. Every purulent cavity should be opened, thoroughly and antiseptically. The purulent cavity of the uterus is no exception. Dilatation of the cervical canal facilitates not only the escape of pent-up secretions but also the application of remedies to the diseased mucous membrane. Moreover, it renders diagnosis poossible by sight and touch.—*Dr. Verchère in Fr. Médicale.*

One-Child Sterility.—Out of 1,081 gynæcological cases Dr. Kleinwächter (*London Medical Recorder*) noted ninety where the patients had borne one child at a more or less distant period, and had remained sterile since, although still cohabiting with their husbands. In twenty-one of the cases the single pregnancy had ended before term. He divided the causes of this kind of

barrenness into ten groups: 1. Sequelæ of inflammatory processes beginning during the puerperium. 2. Catarrhal endometritis. 3. Sequelæ of inflammatory processes traced to a non-puerperal origin. 4. Displacements of the uterus. 5. New growths in the uterus. 6. Constitutional sources of sterility established after the first pregnancy. 7. Impaired potency of the husband. 8. Excessive involution or atrophy of the uterus. 9. New growths in the ovary. 10. Uncertain or unknown causes. These groups are arranged in order of frequency. Forty-three were traced to uterine and extra-uterine pelvic inflammations; that is, to the first three groups; nineteen to displacements and tumors. Dr. Kleinwächter admitted that the causes grouped above as 2 and 4 were not proved in every case to be uncomplicated. He declared that the seven cases making up group 7 were well authenticated by the clinical history, the condition in question appearing to act in a positively deleterious manner on the genital apparatus of the woman. Under group 6 were included cases where anæmia, cachexia, obesity, or emaciation arose after the first pregnancy.

Pathological Anatomy of Ovarian Dermoids with especial reference to their mode of origin is the substance of a monograph read before the British Gynæcological Society by Mr. J. Bland Sutton. The method of investigation adopted was as follows: (1) To ascertain, if possible, the portion of the ovary in which dermoids arise. (2) To find, and trace, if possible, intermediate characters between dermoids and other forms of ovarian cysts. For both purposes it was absolutely necessary to receive fresh material and to be able to deal with the specimens as freely as one could wish. The human ovary, and indeed that of most, if not all mammals, consists of three distinct parts, each giving rise to cysts presenting distinctive features. These cyst-regions are:

1. *The Oöphoron.* This is the region in which ova are found.

2. *The Paroöphoron.* This is termed by a few authors "the tissue of the hilum." It is composed almost entirely of mesonephritic remains (Wolffian body) in varying stages of retrogression.

3. *The Parovarium.* This represents the segmental tubes

and duct of the mesonephros, and consists of three parts—(*a*) Kobelt's tubes; (*b*) the vertical tubes of the parovarium; (*c*) Gartner's duct.

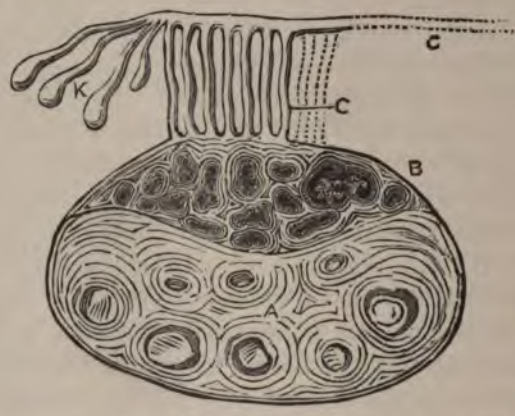

Diagram representing what may be called the *cyst regions* of the human ovary. A, Oöphoron; B, Paroöphoron; C, Parovarium, with K, Kobelt's tubes, and G, Gartner's duct.

These three parts can easily be made out in the human ovary, and in the ovary of many of the higher mammals, but the proportion of the parts to each other vary considerably in different groups, and at the present time he was engaged in investigating this question. The cysts which arise in connection with the ovary and parovarium may be conveniently arranged in three groups according to the region in which they arise:

1. *Oöphoron*—Unilocular cysts; multilocular cysts; cystic corpora lutea; dermoids.

2. *Paroöphoron*—Papillary (proliferous) cysts.

3. *Parovarium*—Parovarian cysts; Kobelt's tubes; pedunculated cysts hanging from the broad ligament.

His first efforts were directed towards ascertaining the relation of dermoids to these three regions of the ovary. In all the examples of ovarian dermoids dissected for the purpose, it was easy to demonstrate that the parovarium was unconnected with them, but in several cases this structure differed in minor particulars from the usual arrangement of the tubules. Another

interesting fact was the frequent association of malformation of the Fallopian tube with dermoids. In some cases there was an accessory abdominal ostium; in others the tube would have no abdominal opening whatever. These conditions have but little bearing on the pathology of ovarian dermoids, for they seem to be quite as frequently associated with other forms of ovarian cystomata. It now became necessary, seeing that ovarian dermoids have no connection with the parovarium, to ascertain as far as possible to which district of the ovary they belong. When a cyst attains a large size this task is an impossible one, but in dermoids of the size of a walnut, and sometimes when they are as large as an orange, it is easy to show that they originate in the oöphoron, and a series of observations carried out for this purpose has had the result of convincing him that ovarian dermoids arise in the same portion of the ovary as multilocular cystic tumors. These cysts arise in Graafian follicles, and it was his intention to proceed to show that ovarian dermoids also arise in these follicles. Having localized the situation of ovarian dermoids to the oöphoron, the task became simple, but laborious, for it involved a large amount of histological work. In the early stages, cysts arising in corpora lutea are easily recognised without the aid of a microscope, on account of the peculiar yellow tissue which forms the wall of the cyst. The multilocular cystic tumors arise in dilated follicles. As we are able definitely to determine the origin of oöphorite cysts in general from the Graafian follicles, it is necessary that we should compare their histological features with dermoids and analyse their points of agreement and difference. When an ordinary oöphorite cyst is compared with a typical dermoid the difference is very striking. In the simple non-dermoid ovarian cyst we find the interior lined by a single layer of flattened epithelium, and this may be difficult of detection. The dermoid, on the other hand, may present skin, hair, sweat and sebaceous glands, teeth, and even a mamma. Should the non-dermoid ovarian cyst be multilocular, the individual cavities may, if not too large, present a membrana granulosa; in the dermoid, the loculi are lined with skin furnished with hair, etc. Occasionally we find a multilocular ovarian cyst

and one little loculus may present a small patch of piliferous skin. Such a combination is far from rare. If we select a highly organized multilocular ovarian cyst, and one of the simplest ovarian dermoids, we shall find that in complexity of tissue the former far exceeds the latter. The glandular cyst presents us with the most perfect columnar epithelium, which not only covers the interior of the cyst but dips into the underlying tissues and forms mucous glands of great complexity, and when suitably stained forms striking objects under the microscope. Between cysts lined with simple flattened epithelium and those presenting glandular masses every gradation may be traced. The lining membrane of some of these cysts is indistinguishable from mucous membrane. The cystic spaces described by Dr. Wilson Fox in his well-known paper (Medico-Chirurg. Trans., vol. xlvii, p. 227) as being formed by the coalescence of adjacent papillæ, are, as a matter of fact, in most cases acini of mucous glands. The larger ones are retention cysts, and are analogous in structure to similar cysts occurring at the cervix uteri and in connection with the labia. It may also be mentioned, as tending to show the close connection between ovarian glandular cysts and dermoids, it is no unusual thing to find mucous cysts in the smaller loculi in the walls of dermoids. We must now proceed to consider the simplest form of an ovarian dermoid. If a cyst in the ovary presents the smallest piece of skin, furnished with only two or three hairs, its dermoid character is established, The presence of a tooth without any skin is sufficient. As a matter of fact every gradation may be traced from the membrana granulosa of an ovarian follicle to the glandular cutaneous lining of a dermoid. In some specimens the epithelial investment is indistinguishable from that lining a unilocular cyst, yet in one small portion of the cyst wall a few hairs on a patch of skin place them in the category of dermoids. Thus far we know that ovarian dermoids resemble non-dermoid ovarian cysts in that they usually consist of one large cyst surrounded by numerous smaller ones. We have already seen that a multilocular cyst of the ovary may present only one tiny patch of dermoid tissue, though the tumor is composed of a multitude of cavities great

and small. There are good grounds for the belief that if all multilocular ovarian tumors were systematically examined, patches of dermoid tissue in the cyst would be found to occur with very great frequency. Lastly, an ovarian dermoid may be multilocular, all its cavities presenting skin, hair or teeth, or all three structures in the same cyst. Thus, in the general disposition of the cavities, single, multiple and mixed dermoids and non-dermoid ovarian cystomata are in agreement. The most highly organized ovarian dermoids are those which contain a well-developed mammary gland capable of secreting a fluid resembling milk. The histological characters of the skin found in ovarian dermoids differs in many ways from that covering the exterior of the body. The epidermis is extremely thin, and it is rare to find papillæ. The sebaceous glands are of very large size and many of them very dilated, as though there had been difficulty in getting rid of the secretion. Sebaceous retention cysts are not uncommon; the sweat glands do not present the twisted ducts with which we are so familiar in true skin. The hairs, too, for the most part, are of very simple structure and resemble lanugo.

One of the first objections which will be urged against the opinions put forward in this paper is this: It is contrary to ordinary teaching that the epithelium of a Graafian follicle is capable of undergoing such variety of shape. But epithelium may change its characters, and a ready method of demonstrating it exists in uterine myomata. When a submucous myoma projects into the uterine cavity its surface is covered with columnar ciliated cells. If, later, the tumor protrudes beyond the vagina, the surface cells will become stratified, whilst those cells lining recesses in the mucous membrane of the exposed parts retain their columnar ciliated condition. Similar changes may be studied in the mucous membrane covering the surface of piles. Again, no one who has studied the anatomy of the various forms of ovarian cystomata can doubt that the multilocular cystomata arise in Graafian follicles. Yet it would be difficult to distinguish between the epithelial lining of many multilocular cysts and the epithelium of a mucous membrane, even to its

glandular recesses. If such a complex cyst as this can arise from a Graaffian follicle, surely we cannot deny the origin of a dermoid from the same source, for skin and mucous membrane are fundamentally identical. Skin covers the exterior of the body, has sebaceous glands, and is furnished with hair. Mucous membrane lines the internal cavities of the body, and has mucous glands. In some mammals, the hare, the buccal mucous membrane is furnished with hair on the inside of the cheek. On the other hand, mucous membrane may have sebaceous glands, as, *e.g.*, that covering the nymphæ. In order to obtain teeth in a cyst lined with mucous membrane we need only calcify some of the cellular projections and a dermoid is the result. Calcific patches and cartilage are not peculiar to dermoids; they have been seen in non-dermoid ovarian cysts. Finally, although there are striking differences between simple ovarian cysts and complex dermoids, nevertheless the difference between a complex ovarian cyst and a simple dermoid is practically nil, and, as a matter of fact, the glandular ovarian cysts are often structurally more complex than many dermoids, and there is no escape from the conclusion that *ovarian dermoids, like oöphoritic cysts in general, originate in Graafian follicles.* The chief reasons may be summarized as follows—

1. The localization of multilocular cysts and dermoids to the oöphoron.

2. The frequent association of a dermoid with a multilocular ovarian cyst.

3. The extreme frequency with which dermoids occur in the ovary can only be accounted for by some functional peculiarity. The only peculiarity it possesses in this respect is the formation of Graafian follicles.

4. Transitional stages can be traced from the membrana granulosa to mucous membrane, mucous glands and teeth on the one hand, to skin, glands, hair, teeth and mammæ on the other.

It must be borne in mind that a distinction exists between dermoids occurring in such situations as the angle of the orbit, tongue, neck, etc., and ovarian dermoids. Finally, it is high

time that some explanation should be offered to account for the origin of ovarian dermoids which shall be more satisfactory than such expressions as *fœtus in fœtu*, *pangenesis*, *parthenogenesis*, *excess of formative nisus*, *hypererchesis*, and other guesses equally vague and unsupported by facts.

On Perineorrhaphy, by Dr. Vilhelm Heiberg.—This article by Dr. Heiberg of Copenhagen deals more especially with the method of operating introduced by Mr. Lawson Tait. After a short resumé of the operation, a brief description of Tait's method is given. The author mentions fourteen cases of lacerated perineum that have been operated on by him after Tait's method, and the result in every case has been most satisfactory, a good, broad, firm perineum being the result, even in cases in which the tear has passed through the sphinter. Dr. Heiberg has tied all bleeding points, though he notes that without ligaturing the vessels "as soon as the deep sutures are put in, the hemorrhage is arrested." He also used strict antiseptic precautions in every case, carbolic or sublimate solutions being the antiseptic preferred. In conclusion, Dr. Heiberg thinks great praise is due to Tait for thus simplifying the operation, and he believes most surgeons, if they once try this method, will prefer it to any other, whether in complete or incomplete tears.—*Birmingham Med. Review.*

Notes on Uterine Versions and Flexions, by Dr. Jacobi.—Out of thirty-five cases of retroflexion, three complained of no symptoms whatever, thirteen experienced no relief from wearing a pessary, fifteen were partially relieved, and four were completely cured. In the opinion of the author, the symptoms in most of these cases of flexion are attributable to an endometritis, or metritis, with venous hyperæmia of the uterus.—*Amer. Jour. Obstetrics.*

The Etiological Relation of Cervical Laceration to Uterine Disease, by Dr. B. H. Wells.—A careful study of 400 cases has led the author to conclude that (1) deep cervical tears do not increase but lessen somewhat the productive fertility of those in whom they have occurred. (2) Cervical tears increase the proportion of backward and downward displacements. (3) While

the average depth of the uterine cavity is but slightly increased in length, the frequency of hyperplasia uteri increases in proportion to the severity of the laceration. (4) Eversions and erosions, where there is a torn cervix, occur more often conjointly than singly, each reacting to increase or induce the other; both their frequency and importance increase rapidly in proportion to the depth of the tear. (5) Cervical laceration tends to produce disease of the uterus and predisposes to the development of cancer. (6) As the result of cervical laceration chronic parametritis is apt to supervene; oöphoritis and salpingitis, though not directly, are frequently indirectly started by cervical tears; various neuroses are frequently present and only cured by an operation on the cervix.—*Ibid.*

Moseley on the Influence of Cicatricial Tissue in the Angles of the Lacerated Cervix.—The author deals with this subject from a strictly clinical standpoint, and his endeavor is to demonstrate that the so-called cicatricial plug deep in the angles of the lacerated cervix does set up numerous and varied symptoms, and is the cause of, or perpetuates, the anæmia so commonly present in these cases. The presence of this "cicatricial plug" is denied by some gynæcologists and entirely ignored by others. Amongst those who acknowledge the presence of this plug and the train of symptoms often set up by its presence are Mundé and Emmet. Dr. Moseley is astonished that its presence is denied, as his experience has led him to believe that this plug is present in almost every case of lacerated cervix, and that it generally extends more deeply on the inner side of the uterus than on the outer side. This extension inwards of the cicatricial plug is, in the author's opinion, the reason that its complete removal can be effected more easily and with less hemorrhage than if the plug extended high up on the outer side of the uterus. Several cases are narrated in which this "plug" was removed from patients suffering various symptoms; and in every case the complete removal of the mass was followed by complete amelioration of the symptoms. In conclusion, the author advocates the complete and thorough removal of all cicatricial tissue from the angles of a lacerated cervix; by doing so our patients

will be cured and the cause of gynæcology advanced.—*Trans. Alumni Assoc. of Woman's Hospital, N. Y.*

Goffe on the Differentiation of Pelvic Cellulitis—After discussing the views held on this subject by various authorities, as Worrat in France, Aran, Bernutz and Goupil, Simpson, Graily Hewitt, Emmet and others, the author concludes that "cellulitis has been dethroned from the prominent position it has held in uterine pathology, and as a serious complication in gynæcological cases. In its place have come salpingitis and peri-salpingitis, oöphoritis and peri-oöphoritis, lymphadenitis and peritonitic bands and adhesions." The presence of cellulitis he does not deny in all pelvic inflammations, but clinical experience, together with the examinations made at autopsies and laparotomies, has demonstrated to him that cellulitis does not play the *rôle* formerly attributed to it. The serous membrane is the tissue chiefly attacked in all pelvic inflammations; cellulitis being secondary and of slight importance, as it is comparatively harmless in its action.—*Ibid.*

The Significance and Localization of Pain in Pelvic Disease, by Dr. H. C. Coe, an interesting article read before the New York Neurological Society in 1887. In a short resumé the author concludes: (1) That pelvic pain has its origin more often in the perimetral tissues than in any particular organ, being due to irritation of nerve trunks rather than nerve endings. (2) That the reflex, or transferred, pains commonly referred to certain lesions in the pelvic organs, may radiate from inflammatory foci in the peritoneum or connective tissue surrounding these organs. (3) That operations upon, or complete removal of, such diseased organs may fail to remove the pain for the reasons stated. (4) That this pain, like other nerve pains, may be sensibly relieved by the proper application of electricity.—*Jour. Amer. Med. Ass.*

Reviews and Notices of Books.

A Handbook of Surface Anatomy and Landmarks. By BERTRAM C. A. WINDLE, M.A., M.D. London: H. K. Lewis, 136 Gower St. 1888.

This little work on Surface Anatomy is an excellent one, and will prove of much service not only to the student but to the practitioner both of surgery and medicine. It is much more elaborate in its details than the old favorite "Landmarks" of Holden, and in consequence will not be so popular with students. Many important surgical points are referred to in connection with surface anatomy, and students are instructed how to properly examine the various orifices of the body. There is nothing very new in this work, but it is an excellent compendium of what is known on the subject and which has appeared in various works. The printing and paper is excellent, but the illustrations are rather meagre. We have, however, no hesitation in recommending it as a companion to every student who wishes to apply his anatomical knowledge to the living or dead subject.

A Manual of Ophthalmic Practice. By CHARLES HIGGENS, F.R.C.S.E., Opphthalmic Surgeon to Guy's Hospital, Lecturer in Ophthalmology at Guy's Hospital Medical School, Surgeon to the French Hospital. With illustrations; 314 pages. London: H. K. Lewis, 136 Gower street. 1888.

The author of this little work professes to have been guided in its preparation by fourteen years' experience as a practical teacher of ophthalmology, and to have aimed at making a concise volume for the use of students and general practitioners. The first four chapters are devoted to optical and general outlines, the examination of the eyeball and its appendages, including the use of the ophthalmoscope, the errors of refraction and their correction. A good deal of space has been allotted to the latter, and the author has certainly succeeded in presenting the subject in a clear and comprehensive manner; indeed we know of none other small work on ophtholmology in which this part

of the subject is, for a beginner, so briefly and yet so fully discussed.

The succeeding seven chapters are devoted to diseases and injuries of the eye and their treatment. In regard to these we think the author has erred somewhat in not going beyond mere outlines; the main facts, however, both in regard to diagnosis and treatment, are carfully recorded.

Part II treats of operations. A description of the marked conditions requiring operation is also reserved for this part of the work. In this departure from the ordinary arrangement there is an avoidance of repetition that is not without advantage. The general style of the book is familiar and easy. It will doubtless meet the wants of those who seek a general rather than a detailed knowledge of ophthalmology.

Manual of Obstetrics, Gynæcology and Pediatrics. By KENNETH N. FENWICK, M.D. Kingston: John Henderson & Co. 1889.

The author informs us in his preface that his object is to furnish an outline of the main facts in obstetrics and diseases of women and children, together with a synopsis of the physical signs of diseases of the chest and diseases of the skin. To cover such an extensive field in 244 pages necessitates a great amount of condensation. The manual is really a syllabus of the author's sessional lectures, prepared specially for the use of his students; supplemented by his own teachings, it will no doubt be of great service to them. Such manuals, however, serve only a limited purpose, and should never be permitted to supersede standard systematic works.

The Life Insurance Examiner: A Practical Treatise upon Medical Examination for Life Insurance. By CHARLES F. STILLMAN, M.D. New York: The Spectator Co. 1888.

This book contains a large amount of information drawn from many different sources conveniently arranged for the use of the life-insurance examiner. The standard works on this subject by

Sieveking, Allen and Levan have been liberally drawn upon, while Loomis, Pepper, Da Costa, Quain, Holmes, Ziemssen, Taylor and others have been also freely consulted. This manual is well indexed, concise and practical, and should be in the hands of every insurance examiner.

Diseases of the Heart and Circulation in Infancy and Adolescence. By JOHN M. KEATING, M.D., and W. A. EDWARDS, M.D. Philadelphia: P. Blakiston & Co. 1888.

The authors in their preface give as the *raison d'être* of this work the absence of any satisfactory description of diseases of the heart in the various otherwise excellent treatises on diseases of children. They have certainly filled the blank in the present small octavo volume, and given us a very full and interesting account of this most important subject. The various chapters deal with—Congenital Diseases of the Heart and Cyanosis; Acute and Chronic Endocarditis and Pericarditis; Myocarditis; Valvular Disease; Cardiac Neuroses; and, lastly, Diseases of the Blood, including Chlorosis, Pernicious Anæmia, Leukæmia, Hæmoplasia, etc. We regret that, as this work is intended for the physician, not for the student, any space should be given to elementary remarks on methods of study, details of instruments, etc., with which the reader presumably should be thoroughly acquainted. The details of cases have been selected carefully, and are, in general, of a most interesting nature. The photographs, unfortunately, show nothing in particular. We can, however, cordially recommend the work as an excellent presentation of a very important series of affections.

A Manual of General Pathology, designed as an Introduction to the Practice of Medicine. By JOSEPH FRANK PAYNE, M.D., Oxon, F·R.C.P., etc. With 153 illustrations. Philadelphia: Lea Bros. & Co. 1888.

This work is well conceived and fairly well executed. That balance in matter and treatment so desirable in a work for students is well maintained. Pathology is at last becoming

something more than morbid anatomy, and it is refreshing to find this fact recognized in a work written by an Englishman. Physiology, as the forerunner of Pathology, takes its proper place, and histology is relegated to that intermediate position it should hold in a work on general pathology. The illustrations are well chosen and sufficiently clear to be useful. The discussions are calculated to develop the student's mind without wearying him; while the mode of presentation of the entire subject is good. We are glad to notice that the dogmatic style is disappearing from works intended for students, as it is an evidence that their teachers believe that their minds possess some elasticity, and that they should not be mere storehouses for such facts as the lecturer may see fit to drive into them. The work is, upon the whole, quite up to the present state of knowledge. This is well illustrated by the chapter on fever, in which, among other things, recent public lectures are noticed. Notwithstanding, the perusal of even so good a work as this impresses the thoughtful reader with the fact that pathology is still in a very crude and inco-ordinated condition. How much of breadth of view and grasp of wider groups of facts is still unattained becomes clear on reading such a chapter as that on inflammation. The nervous system must be made to play a greater part in all our works on physiology and pathology before we can expect to have far-reaching views. But this subject is only beginning to attract that extra share of attention it deserves. We think the work is needed, and that it is, upon the whole, a good one, to be welcomed by the profession and especially by the teachers of pathology.

Treatise on the Diseases of Women, for the use of Students and Practitioners. By ALEXANDER J. C. SKENE, Professor of Gynæcology in the Long Island College Hospital, Brooklyn. New York: Appleton & Co.

The many friends and admirers of the able and genial Brooklyn professor will hail with pleasure the advent of this book. It is dedicated to Thomas Keith, for whom Dr. Skene never loses an opportunity to express his admiration.

The first chapter is on the methods of observation, and in it

the author makes some timely remarks on the importance of teaching medical students to observe, weigh and classify the evidences of disease rather than cram with knowledge from books and lectures. Next comes the chapter on methods of examination, which we think, with advantage to the student, might have been more fully elaborated. It, however, contains the best description we have read of the methods of using Sims' speculum. It ought to be of great service to the student in learning what to all seems to be a very difficult matter. The only bivalve speculum recommended is the Cusco, which we believe to be far inferior to Goodell's base-expanding instrument, or some of its modifications. In the next chapter the development of the organs is considered and the common anomalies briefly described. Next comes a description of the diseases of the external organs. Due attention is given to the various operations for the repair of injuries of the perineum and pelvic floor, but no mention is made of Tait's flap-splitting operation, which we think far the best, especially for the restoration of the sphincter ani. In this operation no tissue is removed, and the method of passing the sutures makes it so comparatively painless that morphia is needed only in rare exceptions.

In the treatment of the inflammatory affections of the uterus the author makes a timely remark as to the indiscriminate use of the hot-water douche, which, although most valuable, is used much too indiscriminately and with heroic persistency. For intra-uterine applications the author uses a glass instillation tube or pipette. We prefer the intra-uterine syringe. Laceration of the cervix is treated with the fullness its importance deserves. For the denudation of the flaps and excision of cicatricial tissue in the angle Dr. Skene has devised a hawk-bill scissors, which he praises very highly. The sutures used are of waxed braided silk. We have for some time used Chinese silk for this purpose and think it has advantages over wire. In the after-treatment a dry tampon is laid against the cervix. We have for the last two years used iodoform-gauze dressing, and believe that the results have been better than by irrigation, while the nursing is much simplified.

The chapters on uterine myoma are fairly good, the Apostoli

treatment receiving a brief description and perhaps its due meed of commendation. In speaking of cancer of the cervix, the author repeats the statements of Dr. James B. Hunter of New York on the milk of Aveloz. This is the juice of one of the Euphorbiaceæ. Dr. Hunter, as a result of his experience of this remedy, says: "All that could be said was that they (the cases in which he had used it) were in some respects better as to the arrest of the disease and as to the comfort of the patients during its progress than those afforded by many of the usual methods. As far as he could judge at present, he should not use the aveloz with any expectation of effecting a cure, but it seems probable that it may do more than some other remedies towards arresting the progress of the disease and perhaps prolonging the period during which surgical treatment may be employed with some hope or promise of success. He had not lost sight of the fact that some cases of cancer of the cervix undergo changes in their progress that might erroneously be attributed to the remedies used; but after making due allowance for that source of error, there still remains something to be said in favor of the drug in question." For total vaginal extirpation of the uterus in cancer Dr. Skene has no favor.

The chapter on the menopause and its disorders is, for its length, one of the best we have ever read. In this, as in many other subjects, the author introduces illustrative cases and so greatly adds to the value of his descriptions. The chapters on diseases of the ovaries and the various necessary operations are all that can be desired. The same may be said of the pelvic inflammations and hæmatocele.

The most conspicuous feature of Dr. Skene's work, however, is the large share of attention devoted to the diseases of the female bladder and urethra. It occupies no less than three hundred and twenty pages, and, as might have been expected from the attention the author has long devoted to this department of gynæcology, it is excellent. The book closes with a most interesting and valuable chapter on gynæcology as related to insanity in women. The author has had probably a unique field for acquiring experience in this line, as for some years he

has had charge of the gynæcologicol practice of the King's County Insane Asylum at Flatbush, where there are four hundred female patients.

We conclude our notice of this work by saying that it is excellent in every aspect, and is illustrated by many woodcuts and a number of beautiful colored plates. The publishers' part has been admirably done.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, October 19th, 1888.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

(Continued from page 477.)

Abdominal Section.—DR. WM. GARDNER related a case in which, at the request of Drs. Rodger and England of this city, he had done an abdominal section. Three weeks before the illness in question the patient, a lad of 16, had had an attack of severe abdominal pain and vomiting. This yielded to a hypodermatic injection of morphia, and in a day or two he returned to his work. The present symptoms consisted of very severe abdominal pain, vomiting, constipation, marked distension of the abdomen, and an elastic swelling of the size of a duck's egg in the region of the right inguinal canal. The pulse was rapid and the face anxious. On examination of the scrotum, only one testicle (the left) was found. The finger could be passed into the external opening of the right inguinal canal, but nothing could be detected. The patient had been etherized by the gentlemen in charge and the swelling manipulated, but without result. Under the circumstances, with a suspicion of strangulation and peritonitis, it was decided to open the abdomen. This was accordingly done by lamplight. The incision made was long enough to admit only two fingers. On incising the peritoneum a quantity of turbid serum escaped. All the ordinary hernia regions were examined and nothing discovered. The swelling in the region of the right inguinal canal was found to be solely in the abdominal wall. Nothing else having been discovered

the opening was closed. The symptoms were all much relieved for three or four days, then the abdominal distension began to increase and became very marked on the eighth day, causing anxiety for the union of the wound. Happily the bowels began to act freely and the boy rapidly recovered, and is now quite well. The swelling in the groin has completely disappeared.

Case of Severe Syphilis.—DR. BELL exhibited specimens from a case of syphilis that had died from tuberculosis of the lungs. The patient was a young girl who contracted the disease in 1886; eight months after was in hospital with severe rupia. This spring she came back suffering from hæmoptysis and some indefinite lung trouble. Patient was put on antisyphilitic treatment, but obstinate diarrhœa set in, the lung complications became more marked, and she finally died from the pulmonary disease, just twenty months after the primary affection. When last in hospital there was severe ulceration of the palate, nose and epiglottis. The post-mortem, performed by Dr. Lafleur, showed the lungs to be both moderately consolidated, hyperæmic on section, and filled with small tubercles, some of which were caseating. The base of the left lung, which was firmly adherent to the diaphragm, was honeycombed by numerous cavities about half an inch in diameter, surrounded by thick, dense and slaty-colored walls. This was the focus of infection for the other parts of the lungs. In both pleural cavities there were extensive recent adhesions. The right half of the epiglottis had been destroyed by previous disease, leaving an irregular cicatrized ledge extending obliquely from its base on the right side to a point a little to the left of its apex. There was no evidence of tuberculosis in the larynx. The liver, kidneys, spleen and intestinal mucosa showed marked amyloid degeneration, and contained a few isolated tubercles. There was no evidence of visceral syphilis. Between the clitoris and the meatus there was an oblong, slightly depressed scar three-quarters of an inch long and half an inch wide. On the trunk and upper extremities there were numerous irregular, white, depressed cicatrices, from a quarter of an inch to two and a half inches in diameter. The right ala of the nose was deficient, and showed cicatricial

contraction. There was extensive destruction of the nasal bones and of the soft palate, the hard palate was perforated, and the uvula entirely destroyed. In the brain there were six localized areas of softening. The contents of these were thick greenish-yellow semifluid matter, sometimes infiltrated with blood. None of these areas were bounded by an inflammatory zone. They occupied the following positions: 1, Superficial portion of left caudate nucleus, half an inch wide, hemorrhagic. (2) In the anterior horn of right lateral ventricle, between the corpus striatum and the white matter, one-quarter of an inch in diameter, contents thick and greenish-yellow. (3) In the centre of the right optic thalamus, about three lines in diameter. (4) In a convolution of the parietal lobe, on the right side, two lines in diameter. (5) In the occipital lobe on the right side, three lines in diameter. (6) In the middle of the left lobe of the cerebellum, a third of an inch in diameter, contents rather softer and hemorrhagic. The membranes and blood-vessels at the base presented no abnormality. The softening was probably due to thrombosis of the smaller arteries. There were no symptoms during patient's life to point to any such condition.

Dr. F. W. Campbell had treated the patient in the out-door department, and did not think the lung complications were due to the syphilis so much as to the hard life led by the patient and her general want of nutrition.

Drs. Lafleur and Bell were requested to report more fully on the condition of the brain and cord.

Tumor from the site of the Left Kidney.—Dr. Wm. Gardner exhibited a tumor which he believed to be the left kidney, removed two days before by median abdominal section. The patient, an unmarried woman of 28, had first noticed the tumor two and a half years previously. It had grown slowly and been moderately painful. On examination it appeared to be of the size of a child's head, was hard, nodular and insensitive, and was so moveable that it could be shifted to any part of the abdominal cavity from its ordinary position on the left side. When the patient lay on her back, its lower end could be felt through the vagina. It could not be felt or pressed into the left loin. Per-

cussion shewed it to be surrounded by intestines. This was unmistakeable in the left loin. She was watched for eight days before operation. There was pus in the acid urine constantly. Night-sweats, but no rise of temperature. At the operation the tumor was found to be behind the mesocolon, and the descending colon lay over its left or outer aspect. The peritoneum and its capsule were incised, and the tumor was then easily shelled out. The attachments were at its upper end, and seemed to be the blood-vessels and ureter. The operation was completed by gathering the edges of the capsule together and including them in the silk abdominal sutures. A glass drainage-tube was inserted; this was removed at the end of forty-eight hours. Her progress had been entirely uneventful, and now, the ninth day, recovery is assured. On section, the tumor was moderately firm, the surface greyish-white and fibrous. There are several loculi, some containing pus and others a yellowish transparent fluid. Urine was secreted plentifully from the first; the first two specimens contained some blood but no pus, since then it had contained only a little pus. This latter portion of the evidence seemed conclusive that the tumor was the kidney. All the available facts seem to prove that this was originally a moveable kidney which had become diseased.

Discussion.—Dr. Roddick asked Dr. Gardner if he would have performed the median incision if the diagnosis of kidney tumor had been made out before operation. He was inclined to regard it as a myosarcoma, and related a case in which he had operated for a similar growth in a child which turned out to be myosarcoma.

Dr. Lapthorn Smith congratulated Dr. Gardner on the success of his operation, and said he was glad to see the gynæcologist wresting further territory from the surgeon.

Dr. Shepherd asked Dr. Gardner if it was not usual in cases of removal of the kidney by the median incision to drain through the loin. He regarded the kidney as rather an anomalous one, as all the vessels seemed to enter the upper end, and no trace of a ureter could be made out. The tumor, if a kidney, was probably functionless.

Dr. Gardner, in reply, said that for such a tumor the median incision was the best; the tumor was so movable that it could not be felt at all from the lumbar region. He was aware that some surgeons recommend drainage through the loin in such cases, but he thought that where the enveloping peritoneum was so loose, and could be so easily brought to the surface, as in this case, and be drained through the abdominal wound, the method adopted by him was preferable. The tumor was given to Dr. Lafleur for examination and report.

Intestinal Obstruction from a large Gallstone.—Dr. Ruttan exhibited a large spherical calculus sent to him for examination by Dr. DeWolf Smith of British Columbia. The patient was an insane inmate of the penitentiary that had died with symptoms of intestinal obstruction. There was no history of biliary colic. The post-mortem showed the lumen of small intestine to be completely filled by the calculus shown at the point of obstruction and for some distance above there was inflammatory thickening. Chemical examination of the calculus showed it to be a compound biliary calculus composed of nucleus of biliary pigment, surrounded by a zone of cholesterine half an inch in radius, made up of radiating plates; about this was an outer zone one-fourth of an inch thick, composed of pigment, salts and cholesterin, making a total diameter of nearly one and a half inches. That the calculus had not increased since its passage from the gall-bladder was probable, as the bile pigments were found unaltered in the outer layers. It is to be regretted that the condition of the gall duct was not noticed at the time, as cases are recorded of much larger calculi than the one shown having reached the intestines through the duct, and not, as is so common, by ulceration through the gall-bladder into the duodenum.

Dr. Shepherd referred to a gall-bladder seen in the dissecting-room where the duct was large enough to admit the passage of the thumb, and from the bladder itself a skull-capful of calculi was obtained.

Dr. Roddick saw with Dr. Kennedy a case where the most severe symptoms simulating hepatic cancer were relieved by the passage of a calculus as large as a walnut. Patient recovered perfectly.

DR. MILLS thought the exact locality in which the calculus was found in the intestine would be of interest, as if high up in the duodenum the biliary constituents of the outer zone might have been added after the passage of the calculus and the pigments still remain unaltered.

DR. BULLER cited a case where permanent relief had been afforded a patient who suffered from biliary colic by the use of large doses of phosphate of soda.

DR. F. W. CAMPBELL had very little faith in remedial agents for the cure of biliary colic. Phosphate of soda had proved as inefficient as all the others.

DR. GARDNER said that Mr. Lawson Tait's operation of cholocystotomy now afforded a means of relief for obstruction of the duct from biliary calculi.

PRESIDENTIAL ADDRESS.

DR. PERRIGO, the retiring President, then read the following address :—

I think I am safe in saying this is the first time I have been guilty of addressing the members of this Society, and I hope you will pardon my doing so now. Now that the ice is broken, I trust it will not be the last. I am quite ready to acknowledge the fault is altogether my own, but I assure you it has not been due to any want of interest in the Society's work, because I have never yet attended any of the meetings without feeling I had learned something I had not known before, or had my memory refreshed upon some points forgotten. The mistake began, when I first became a member, in not then taking an active part, and as time went on, a natural diffidence in speaking before a gathering overcame any courage or inclination to do so. I do not wish you to consider I am speaking too much of myself in order the more fully to apologise for my shortcomings, but I say this because I see a good many young members who are pursuing the same course. If they allow a certain number of years to pass they will occupy my position and become mere listeners to other workers, to the men, in fact, who make this Society flourish. If the younger members will prepare themselves before the date

of each meeting, read a paper occasionally, be ready to defend it, and not be discouraged at any of the criticism from their more experienced seniors, they will find they will be adding considerably to their own medical knowledge and to the interest of the Society's proceedings.

Speaking upon this point naturally brings me to another, and that is, the growing absence of some of our seniors. No doubt they feel they have earned a well-merited rest from any further active work among us, although still busily engaged in medical education, yet, if they would only consider their presence here as part of their educational work, they would be conferring a benefit upon every member here. Their experience would serve to temper any of the advanced theories occasionally brought forward, and which are so apt to carry away the enthusiastic. Not only that; the mere knowledge of their being present, and of their taking part in the debates, would bring members regularly here who only come occasionally now.

The work of the Society has been unusually interesting during the past year, and of greater volume. There have been sixteen papers read this year, as opposed to twelve during the previous year:

1. Notes on Acetanilide, by Dr. McConnell.
2. Treatment of Ulcers by the Transplantation of large pieces of Skin after Thiersch's method, by Dr. Jas. Bell.
3. Questions suggested by the present Epidemic of Diphtheria in Montreal, by Dr. Armstrong.
4. The Dangers and Accidents of Local Treatment in Puerperal Cases, by Dr. J. C. Cameron.
5. Physiological and Pathological Reversion, by Dr. Mills.
6. Laboratory Notes on Papoid Digestion, by Dr. Ruttan.
7. A case of Diabetes, by Dr. Kennedy.
8. The Pharmacology of Arsenic, by Dr. Stewart.
9. The Bacillus of Scarlatina, by Dr. McConnell.
10. A case of Lightning Shock, by Dr. Mills.
11. Electricity in Gynæcology, by Dr. Smith.
12. Some rare forms of Extravasation of Urine, by Dr. Bell.
13. Poisoning by Bichromate of Potash, by Drs. Ruttan and Lafleur.

14. Some rare cases of Syphilis, by Dr. Roddick.

15. Notes on Tapeworm, by Dr. Spendlove.

15. Orbital Tumor treated by Ligation of the Carotid Artery, by Dr. Buller.

Most of these papers were of the greatest value and interest, and elicited sometimes lengthy discussions, which showed that medical men at present are more apt to think for themselves rather than follow the dicta of big guns miles away. In addition to these papers there have been a large number of pathological specimens exhibited and the clinical history attached to most of them related. It is almost impossible to relate them all, but the more important ones that elicited most discussion were—

1. Resection of the Intestine, by Dr. Jas. Bell.

2. Specimen of Tubercular Cystitis in the practice of Dr. Roddick, and shown by Dr. Johnston.

3. Development of Bone from Periosteum, by Dr. Bell.

4. Calculi from four cases of Lateral Lithotomy, by Dr. Fenwick.

5. Rupture of the Heart, by Dr. Reddy.

6. The Respiratory Organs in a case of Diphtheria which proved fatal two days after the performance of intubation, the tube being shown *in situ*.

7. Dr. Hutchison showed the Sixth Cervical Vertebra, which had been dislocated, and gave a history of the case.

8. Dr. Armstrong showed two Brains, one a case of apoplexy and the other one of cerebral syphilis.

9. Dr. Ross showed a Carcinoma of the Stomach and Liver.

10. Two Uteri extirpated by the vaginal method, one for cancer and the other for chronic endometritis, by Dr. Gardner.

11. A Patella that had been sutured, shown by Dr. Bell, the patient dying from pyæmia from a suppurating ingrown toe-nail.

12. A Perforating Ulcer of the Stomach, shown by Dr. Armstrong.

13. Dr. Lafleur showed for Dr. Shepherd the specimens, and described the post-mortem appearances, in a case of Pyelo-Nephritis, where there was infiltration of urine with sloughing of the urethra.

14. Dr. Roddick showed a Calculus weighing 15 drachms which he had removed by the supra-pubic method, in the case of a man 52 years old. The operation was successful. Twelve years ago he had removed a stone by the lateral operation in the same individual.

15. Dr. Bell showed an Exostosis, the size of a fameuse apple, which he had removed from the inner border of the lower end of the right femur of a young man.

During the year a number of patients have been brought to our meetings, the first being a case of Dr. Bell's, a child of 3½ years old, where osteotomy for bow-legs was performed with favorable results. Dr. Stewart also showed a patient suffering from amyotrophic lateral spinal sclerosis. Dr. Shepherd showed a patient who had, he thought, suffered from a subdiaphragmatic abscess, and described the difficulties attending it. Dr. Armstrong, a case of alopecia areata. Dr. Smith, one of fibroid of the uterus, showing the results of electrical treatment. Dr. Bell also showed a case illustrating the treatment by skin-grafting for severe burn.

Most of us know the difficulty in persuading patients to consent to come before a meeting, and I am sure I am only expressing the feelings of the Society that these gentlemen richly deserve our thanks.

In addition to the papers read, the pathological specimens shown, and the patients brought before us, there have been quite a number of interesting cases related in practice, viz., a case of parasitic onychia and one of amputation of the thigh for periosteal sarcoma, by Dr. Bell; a case of cystine calculi passed per urethram and one of periosteal sarcoma of the femur, by Dr. Roddick; history of cases of intubation, by Dr. Major; a case of cirrhosis of the liver, by Dr. R. L. MacDonnell. Dr. Gardner related the case of a dermoid ovarian cyst in a pregnant woman, this being his second ovariotomy during pregnancy, both mothers being safely delivered afterwards of living and healthy children. Dr. Shepherd related a case of nephrotomy for hydro-nephrosis.

Perhaps the most interesting case related during the year was

that by Dr. Gardner of abdominal section for rupture of a tubal extra-uterine fœtation occurring in the practice of Dr. Browne. This case showed in a most conclusive manner the great value of prompt operative interference in cases where there has been an early and accurate diagnosis made. Both physician and surgeon deserve credit for the result of this case, the first of its kind in Canada where abdominal section was resorted to.

Dr. Trenholme related the cases of seven consecutive successful ovariotomies.

This is, I think, a pretty fair *resumé* of the work accomplished during the past year, and compares favorably with that of preceding years.

The question of either enlarging our rooms or of securing more commodious and better ventilated ones elsewhere has frequently come up for discussion. The matter has now been left in the hands of the Council and we may expect their report at an early date. No one will doubt the necessity of more room and better ventilation, but this means an enlarged expenditure, so that the matter of the arrears in subscriptions is becoming an important one. Our financial condition is not such that we can afford to ignore these arrears much longer, and I have no hesitation in saying it is but a false delicacy in allowing them to remain and to go on augmenting. This is a question that also should be placed in the hands of the Council.

Four Cases of Peritonitis during Pregnancy.—Dr. A. D. Blackader then read a paper on these cases, which appeared in the December number of this Journal.

Discussion.—Dr. Hervey of Calcutta referred to a case of post-partum hemorrhage which was undoubtedly due to adhesions to the uterus from previous peritonitis.

Dr. Alloway said he did not think a pregnant woman was as liable to have peritonitis as others. If Dr. Blackader had been fortunate enough to have had a post-mortem on any of these cases he might have found the peritonitis to be due to a ruptured tube or the remains of an old peritonitis in the form of adhesions. Women who have previously suffered from pelvic

inflammation would naturally be liable to peritonitis from the effects of enlargement of the uterus.

DR. LAPTHORN SMITH had a woman under observation who has pelvic adhesions that involved the uterus from an old peritonitis. If these adhesions broke, a peritonitis would very probably result.

DR. WM. GARDNER said that laparotomies often revealed conditions previously unsuspected, and agreed with the previous speakers that the remains of old pelvic trouble might account for some of these cases of peritonitis.

Stated Meeting, Nov. 2nd, 1888.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

Excision of the Right Knee in a case in which the bones were very extensively diseased.—DR. JAS. BELL exhibited the patient and related the case as follows:—

P. Q., aged 36 years, a farmer, was admitted to hospital with the following history: He had been crippled for eight years with a gradually enlarging knee joint, and for three years past had been unable to walk except with a crutch. On examination, the joint was found to be very much enlarged, doughy to the feel, and tender on movement, which also communicated a sensation of roughness to the hand. Excision was performed, but on making section of the ends of the bones four large sequestra were found in the end of the femur and three in the head of the tibia. These were all wedge-shaped, with their bases towards the joint, and differentiated from the healthy bone by a thin velvety membrane. Two of them were gelatinous masses; the others necrosed bone. They were easily removed, and the cavities which had contained them thoroughly scraped. Owing to the removal of these bodies there was comparatively little healthy bone approximated for union. At the end of six weeks, when the dressings were removed, there was very little union, but now, at the end of three months, union is pretty firm, and will doubtless result in complete consolidation.

Separation of the Epiphysis of the lower end of the Femur.—DR. JAS. BELL exhibited the case and gave the following

history: A. B., a young English immigrant boy, aged 16 years, had been trampled in the stall of a vicious horse five weeks before coming to hospital. On examination, the epiphysis of the lower end of the left femur was found to be displaced outwards about three-quarters of an inch and united in this false position, The lower end of the shaft of the femur had ulcerated through the skin and was projecting inwards towards the right calf, whilst the leg was displaced outwards at a corresponding angle. The patient was anæsthetized, and as the parts were very firmly united, it was thought better not to separate the epiphysis again. The lower end of the shaft was therefore chiselled off and the leg straightened by an osteotomy, the section being made about an inch above the epiphysal line. The boy made a perfect recovery, and is now (four months after operation) a message boy in the city. The movements of the knee-joint are almost perfect, flexion only being slightly limited.

Compound Fracture of the Olecranon.—DR. SHEPHERD exhibited the patient and stated that the separated fragments had been sutured with silk, the result being complete bony union. The patient, aged 25, whilst working on board a ship, was struck on the elbow of the left arm by the fan of a ventilating apparatus. This split the olecranon process vertically and opened up the joint. When he came to the hospital the wound was covered with dirt, and on separating the lips of the wound it was seen that the olecranon process was split into two portions longitudinally, and the joint was opened. After cleansing the wound the separated fragments of bone were brought together with two silk sutures and the wound closed, a small drain being left at the lower end. The dressing of gauze and jute were left on for three weeks, and when removed the wound was found to be perfectly healed and the bone united. The patient went to work a month after the accident, but for a time the movements of the joint were rather limited. The accident happened in July last. At present he has as good motion in the injured elbow as in the other.

Progressive Hemiatrophy of the Face.—DR. STEWART exhibited a case and read a short paper on this affection, which

appears in the present number of the JOURNAL. It was discussed with Dr. Cameron's case of diabetes in a puerperal woman. (*Vide infra*).

Reversion in a Pigeon with Tuberculosis.—DR. T. W. MILLS exhibited a specimen of both physiological and pathological interest in the form of a perfectly white Jacobin pigeon bred by himself from a pair of red birds. Was it a case of albinism, a "sport," or an instance of reversion as understood by Darwin, or what breeders term "throwing back"? Albinism was well known among wild animals (rabbits, squirrels, etc.), and "sports" or the appearance of variations not to be accounted for on any well recognized principles also occurred. Upon the whole, Dr. Mills thought this a case of reversion. A white cross has been known to show itself in (Jacobin) pigeon-breeding after nine years of careful breeding. The subject had been considered important by Darwin, for it was largely upon the evidences of reversion to forms and markings peculiar to wild species that this writer founded his view that our domestic animals were derived from a few wild forms. The bird shown had died two days previously after ailing only about three weeks. It was a late-bred pigeon, and a post-mortem examination showed that the organs contained tubercles in every stage of development and degeneration. The moulting season was a very trying period for birds. Dr. Mills related an observation he had made to illustrate this: A young cockerel getting its second feathers was noticed to be bleeding in the region of the tail. Examination showed that the blood was oozing from the roots of the new feathers. The abundance of blood diverted to the skin, and a corresponding demand for nervous energy in this quarter explained why other parts should suffer, and illustrated the general views he entertained as to the part played by the nervous system in the vital processes and the practical importance of maintaining the balance of function so often disregarded both by brain-workers and by muscle users, as athletes. The case seemed to him very clear. The specimen also illustrated the principles that seemed to hold in regard to tuberculosis among the lower animals—the extreme rapidity of the process and the extensive character of the lesions.

This bird had been ill apparently only three weeks, and was fairly well nourished at death. The tubercles were very widely distributed, the organs inflamed, and bound together by recent adhesions. Owing to enlargement of organs and pressure, the apex of the heart was squeezed to such an extent that it must have been functionless, while the immediate cause of death was in all probability mechanical interference, in part at least.

DR. SHEPHERD said he was much interested in the case of reversion exhibited by Dr. Mills, and stated that it was not at all uncommon in the human family. There is in nearly every person's anatomy some form of reversion to an earlier type. As bearing on these reversions in color, he instanced the occurrence of a red head in a family in which it had not been seen for several generations. He also mentioned a case which had lately come under his observation of a cow having two rudimentary metacarpals developed in the far limb, these being the rudiments of the second and fifth toes.

DR. SMITH asked if such a bird would be fit for food. He had no doubt that many birds were offered for sale that were subjects of tuberculosis.

Diabetes following peculiar nervous symptoms in a Puerperal Woman.—DR. J. C. CAMERON reported the case, which appears in another part of the JOURNAL.

Discussion.—DR. MILLS, in speaking of the cases detailed to the Society by Drs. Stewart and Cameron, referred to the views he had recently presented on the relation of the nervous system to the vital processes at the meetings of the Canadian Medical Association and the Washington Congress (now in course of publication in the *New York Medical Journal*). He thought it would greatly widen our conceptions and give truer views both of physiological and pathological processes if all the vital processes (metabolism) were regarded as a related whole, the parts of which could not be isolated and placed out of relation with the rest. That such had grown up in our minds was the result of book treatment and had no foundation in nature. What was "nutrition"? Could it be considered apart from secretion, heat production, etc. He maintained that it could not without the

danger of getting artificial conceptions. Were these trophic nerves ? was a question subordinate to, Does the nervous system in mammals regulate the entire metabolism or only certain phases of it ? If it regulated secretion, he did not see, apart even from special evidence, how the conclusion could be avoided that it regulated heat production, etc., for these processes were only *phases* of an inseparable whole while life lasted. It would appear that physiologists had substituted their own artificial conceptions for the real state of the case as it exists. In one sense all nerves were trophic. Dr. Cameron's case was a remarkable, but not isolated instance of the truth of the view that heat production was under the influence of the nervous system ; and if so, why not the entire metabolism of the body. If the sugar in the urine in this case was really grape sugar, it was another evidence for such a general view as he was advocating. The narrow views as to diabetes being due to disorder of the liver only must also be abandoned. We were satisfied with explanations that were too simple and also artificial. We constantly forgot how complex the relations among the different parts of the body were.

Dr. Lapthorn Smith said he had seen the temperature rise as high as 103°F. after drinking a cup of hot tea. He had also seen the receipt of bad news cause an elevation of temperature in puerperal women.

Dr. Ruttan asked if lactose had been looked for in this case. Milk sugar in the urine is not at all an uncommon phenomenon in puerperal women, especially when the breast secretion stops or when the child is weaned. Lactose, like glucose, reduces copper, but, unlike it, it does not ferment with yeast. The phenyl hydrazin test would also show the difference between these two carbohydrates.

Dr. Geo. Ross said that the striking observations of Dr. Cameron were of the greatest interest ; he was not aware of similar ones. Elevation of temperature in connection with nervous diseases seems to be true. In the puerperal condition the nervous system seems to be particularly liable to disturbance. A similar condition seems to exist in convalescence from typhoid. *Sudden* elevations of temperature are commonly seen after

typhoid from nervous and emotional causes, but are of no serious import. This elevation is quite different from the gradual rise that indicates a relapse. Glycosuria is not usual from the trivial causes which give rise to these elevations of temperature; indeed, elevation of temperature does not usually accompany sugar in the urine. The fact that the temperature dropped at night, became elevated during the day, and yielded to bromide of potassium, was significant of nervous disturbance.

DR. REED, referring to Dr. Stewart's case, related a case of atrophy of the muscles of the face without atrophy of the other tissues. He also referred to cases of elevation of temperature caused by the shock of a railroad accident.

DR. BLACKADER stated that intense fright sometimes produced elevation of temperature.

DR. STEWART said that in the case exhibited by him there was atrophy of bone, muscle and subcutaneous connective tissue. Dr. Cameron's case showed the value of methodical observation. There is an Hippocratic axiom which says that the action of drugs shows the nature of the disease. The fact that the bromide of potassium acted as an antipyretic, points to the neurotic origin of the pyrexia.

Correspondence.

NEW YORK, Dec. 27, 1888.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

The medical department of the University of the City of New York is now experiencing one of those disturbances which most colleges at some time or other have to undergo when a change in the teaching staff does not meet with the approval of the students. Disturbances, however, are of various degrees, and that which took place a few days since well deserves to be classed as superlative. The writer happened to be present a few years ago when one of the professors made an announcement which was agreeable to the students. The vociferous and continued applause that followed made him feel that for once he was brought into contact with the noisy medical student, as he

is usually described. The students stampeded, kicked violently the desks in front of them, shouted at the top of their voices, and invented so many ways of keeping up a continued noise, that it was fully fifteen minutes before the professor was allowed to go on with his lecture. So much for the university medical students in their amiable moods. Taken in the opposite condition, one's imagination need not be exerted to any extent to fancy what their powers are. These they have manifested for the past week by driving the professors from the lecture halls by cat-calls, hoots and groans, and it is even added with things of a more tangible nature, to evade which the men of learning had to use all their customary wisdom and more than their customary agility. The rebellion, as it is aptly termed by one of the leading dailies, arose from the dissatisfaction felt by the students with the treatment by the Faculty of Professor F. D. Weisse, the author of a recent work on surgical anatomy. Shortly after the opening of the session Prof. J. W. Wright resigned, and the chair of surgery which was thus vacated was bestowed upon Dr. Lewis A. Stimson, the professor of anatomy. This was considered a just and usual promotion, but it was expected by the students that Prof. F. D. Weisse, who held the chair of Practical and Surgical Anatomy, would be promoted to the chair of Anatomy. This was not done, however, and Prof. Stimson undertook for the time to fill both chairs with some assistance. He soon found the double task too onerous, and one day announced to the class that in the future the lectures on anatomy would be delivered by Dr. Woolsey, a graduate of the College of Physicians and Surgeons of three years standing, and who, since his graduation, had studied abroad. Although a feeling of dissatisfaction had been evident for some time, it was now only that the smouldering embers burst into flame. Excitement became rife, and the Freshmen's voice, probably from its freshness and unimpaired strength by any, as yet, too close and continued application to study, was naturally heard above that of all the others. Here was a man, they said, taken from a rival college to teach them when they had among them a popular graduate of their own institution who was recognized over the world as an authority on anatomy. The students grew more indignant, and the excitement reached its climax when they soon afterwards learned that Prof. Weisse, not pleased with his treat-

ment, had tendered his resignation, to take effect at the end of the term. The students make the charge against Prof. Loomis of wishing to have things in the Faculty all his own way, and that his opposition to the appointment of Dr. Weisse arose from his dislike of having anyone admitted as a member of the governing faculty who would likely exhibit any independence. They blame him, also, as being the instigator of Prof. Wright's resignation, who was quite popular with the students. Prof. Loomis denies these charges, and declares that the statements are all false. The reason which he gives for the non-appointment of Prof. Weisse is that the Faculty have resolved to decide the appointment by competitive examination—an examination which is open for Prof. Weisse as for anyone else. He further says that Prof. Weisse was simply a subordinate in the anatomical department and had no right to succession, as he was not in the order of promotion.

Prof. Weisse's formal statement, as it appears in one of the most reliable morning papers, is rather a lengthy affair. It is to the effect that he first became connected with the University in 1863 in the capacity as assistant to the chair of surgical anatomy. In 1876 he undertook the teaching of practical anatomy under a newly-created title of Professor of Practical and Surgical Anatomy. A form of contract was entered into with the Faculty by which he engaged to run that department without any expense to the Faculty, by which the Faculty promised that he would not be interfered with by the then or any future professor of anatomy. In the spring of 1888 the contract was broken by the Faculty by appointing the then professor of anatomy, Dr. Stimson, on a committee to investigate the efficiency of his teaching. One thing led to another, and it ended in his sending his resignation to the Dean.

The students have been holding noisy indignation meetings, and appointed a committee to call upon the Dean asking that Prof. Weisse be appointed to the vacant chair of anatomy. If this request is not granted they threaten to go over to the Bellevue Medical School. Thus the matter stands, as far as they are concerned, until the expiration of the holidays, There can be little doubt what the action of the Faculty will be in the matter, In the forcible language of the Dean, "If it comes to the point whether this college is to be run by the students or the Faculty we will settle it in short order." When the students' ardor will be cooled off a little by time and reflection they will scarcely carry out their threat, which to many would be an impossibility from a pecuniary point of view, as they would lose their entrance fees. X.

THE

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SURGICAL MISHAPS.

It has been said that in surgery we learn more from our mistakes than our successes, and there is no doubt some truth in this assertion. We all, however, wish, if possible, to gain this knowledge from the mistakes and mishaps of others, and are always pleased when these are pointed out to us in such a way as to prevent similar misfortunes occurring in our own practice. Some of the accidents of surgery may be classed among those disasters which cannot be foreseen or prevented, but many are preventable, and are due either to gross carelessness or ignorance. We are indebted to Prof. Nussbaum of Munich for a most interesting and instructive monograph entitled *Über Unglücke in der Chirurgie*—a second edition of which has lately appeared. If this be carefully perused by the young practitioner he may be saved much suffering in reputation, mind, and pocket. In speaking of anæsthesia, Prof. Nussbaum recommends ether in cases of weak heart in preference to chloroform, but still he does not think chloroform dangerous, for in between eleven and twelve thousand administrations only one death occurred. This, he says, is not a greater mortality than would follow eleven thousand balls, dinners and such like amusements, and hence chloroform is not a bit more dangerous. It is probably quite as safe as tobogganing or football. Vomiting and retching, our author states, can be easily allayed by the hypodermic injection of a little cocain. No doubt many cases in this country which die after operation from so-called shock are victims of ether badly administered. Not a few etherizers give the anæsthetic recklessly on the supposition that it is a perfectly safe thing, and patients are sometimes poisoned by an overdose of the drug and occasionally die of

asphyxia on the operating table. However, as Nussbaum says, all the deaths which occur during the administration of chloroform or ether are not due to these drugs, for even before the days of anæsthetics sudden death occurred before and during operation. Dupuytren records no less than nine such cases where death occurred before the operation was commenced. One case, a boy with stone in the bladder, was on the operating table, and before commencing Dupuytren marked the perinæum with his finger-nail to show the students the line of incision; while doing this the boy died. We hear occasionally of sudden death following the simple operation of catheterism.

Among the accidents which may follow operation or other traumatism we have tetanus, traumatic delirium, mania, delirium tremens, fat embolism, septicæmia, pyæmia, etc.

These are misfortunes which are not easily prevented and which often prove fatal. The most unfortunate accident of surgery is a death from hemorrhage; children under three months stand operations badly, and a comparatively small amount of hemorrhage may prove fatal. Deaths have occurred from the bleeding after the operation of hairlip or the opening of an abscess. In adults it was formerly thought to be a fatal accident if the jugular or crural veins were wounded. Now, injury of these vessels is no longer dreaded, and they are tied as successfully as arteries. Nussbaum says the best known instrument to arrest hemorrhage is the operator's own finger; it is soft, elastic and impermeable to moisture, it can be easily disinfected, and is the surest means when the exact spot of the hemorrhage cannot be immediately determined; in hemorrhage due to gangrene of the vessels no other method is as good. Sepsis is the greatest misfortune of surgery, and is usually a preventable one. When speaking of fractures, Prof. Nussbaum sagely remarks that the treatment of no affection brings the doctor so many stripes and so little credit as that of fractures; still he contends that only by gross carelessness in the treatment will gangrene supervene in the great majority of cases.

Amputations also may result in many misfortunes. The flaps may be too short and a scar, which is a life-long trouble to the patient, be left over the bone. He relates the case of an individual who came to a klinik for the purpose of hav-

ing one of his legs amputated for incurable multiple ulcers. There were ulcers on both legs and both were bandaged up. The surgeon unfortunately amputated the best leg, and, curious to relate, after this the ulcers on the leg which had been at first condemned rapidly healed. It is said that on the field of battle not a few sound limbs have been amputated in the excitement of the moment, and this, too, by experienced surgeons.

In pulling teeth the jaw has not infrequently been fractured, and Nussbaum relates a case of his own where endeavoring to extract two teeth which were locked together, he dislocated the jaw and finally had to chisel out the teeth. The jaw was replaced and when the patient was recovering from the ether he retched violently and the jaw was again dislocated. It was again replaced and fixed by a bandage. He also relates a case of large tonsil which he endeavored to excise with a tonsillotome. The tonsil was so hard that the cutting part of the instrument broke off. On examining the part he found there was a concretion in the tonsil. He could not find the broken piece of the instrument anywhere—the patient had swallowed it. However, under the persuasive influence of a dose of salts it was passed per rectum a couple of days after. When speaking of the dangers and difficulties of tracheotomy the author relates a story of one of his own pupils in large practice who asked him to help him to perform his first tracheotomy. The child was three years old and thin. The operator boldly cut down and exposed the trachea, as he thought, then incised it and endeavored to introduce the canula, but failing to do so he cried out that the whole trachea was so filled with membrane that the canula could not be introduced. Nussbaum examined the wound and found that the young operator had laid bare the spinal column and incised the inter-vertebral substance and thought he had cut into the trachea which had been pushed aside. Sudden death during or even before the operation of tracheotomy is familiar to surgeons who frequently perform this operation, and the immediate cause is the anæsthetic, which acts badly in cases where the respiration is obstructed. In adults, cocain may be substituted with advantage.

There are many other mishaps alluded to by Nussbaum,

such as the incision of a hernial tumor on the supposition that it is a suppurating gland, which is a much more serious mistake than cutting down on a suppurating gland thinking it is a strangulated hernia; cutting into a bladder and finding no stone; excision of the testicle for hydrocele; cutting off the end of the glans penis in the operation of circumcision; wounding the bladder or ureters in ovariotomy or extirpation of the uterus, etc. But we have already exceeded our limits, and however tempting the further consideration of these misfortunes might be, space does not permit us to more than mention them. At some future time we may return to this most interesting subject.

ALEXANDER'S OPERATION.

How opinions change as time passes on. A few years ago it was thought by a majority of surgeons that Alexander's operation would pass away and not come to the surface again. Of late, however, there have been investigators at work who have brought the claims of Alexander regarding the shortening of the round ligaments again before the notice of the profession. And in this respect it is satisfactory to note that many of the surgeons who failed to get satisfactory results during their first attempts, have now become enthusiastic in praise of its curative powers. In the retrospect of our present issue our reviewer gives a synopsis of a paper recently published on this subject by Dr. Mundé, of New York. In Dr. Mundé's declaration that further experience has caused him to change his opinions, and that, in the majority of cases, the ligaments *can* be found if sought for in a correct manner, we have a very strong argument in favor of the operation and of the benefits which we can fairly hope will accrue from it. The operation has now been performed about three hundred times. In the beginning of its career it was received with universal favor in England, somewhat with indifference in France, and in America only one operator—Polk—had expressed himself completely in its favor, saying it was the most effective of all methods towards the cure of, in particular, prolapse of the uterus. Mundé, although having suffered some failures at first, and much discouragement, always allowed that the operation was rational in theory, and that if the ligaments

could be found and shortened, a permanent cure could be looked for. Many surgeons, however, are yet unwilling to admit that pessaries, perineorrhaphy and elytrorrhaphy, have entirely lost their usefulness, and that every woman with displacement should have her ligaments shortened. When extreme views of this nature were entertained the procedure became open to much abuse, as is the case with every new operation, and when those who held those views failed to obtain cherished results, chiefly through their own insufficiency, they at once began to roundly abuse the method; the finding of the ligaments could not be relied upon; when found they often would not run; when they did run they dragged the peritonial covering with them, endangering the patient's life from an attack of peritonitis; hernia, septicæmia, and other surgical horrors would result, all of which hallucinations we can now see have been the outcome of hysterical or unstable minds.

In 1886, Dr. Manrique of Paris published a small book upon this operation. The conclusions he reached from a careful and exhaustive study of the subject are as follows: The operation of shortening the round ligaments is perfectly rational from an anatomical and physiological standpoint. It cures deviations and displacements by placing the uterus in such a position that the current of the forces, which gravitate towards the pelvis, will converge behind that organ instead of impinging on its surface. Complete or incomplete prolapse may be cured by this operation, except when complicated by periuterine adhesions. Where cystocele, rectocele or prolapse of vagina complicated with the uterine displacement, elytroperineorrhaphy should be performed in addition to Alexander's operation. The operation will also restore the prolapsed ovaries if not adherent. It does not interfere with the course of gestation nor the phenomena of labor.

Of the recorded cases of death following Alexander's operation none have been proven on enquiry but one of Alexander's own and one of Bozeman's. In both of these cases the cause of death was pyæmia. From an impartial standpoint, then, Alexander's operation may be said to be free from danger, rational in its aim, and probably effective in results.

There is a historical side to this operation, to which we will

briefly allude. The assertion of Doléris that the operation should be known rather as Alquié's than Alexander's is incorrect and unjust. It seems that in 1840 Alquié suggested the method, but there is absolutely no record of his ever having performed it. In 1864 Deneffe actually performed the operation, but failed to find the ligaments. In 1869 Kœberlé of Strasburg, during a gastrotomy, sewed the left broad ligament in the angle of the abdominal wound and thus permanently cured a retroversion. Up to 1881, therefore, it is clear that no operator designedly shortened the round ligaments with the end in view of curing prolapse of the uterus. It was in this year that Alexander operated and in the following year he published his first four cases. It is evident, therefore, that to Alexander belongs the credit of having shown that the operation was feasible, although theoretically it had suggested itself to others and had once been unsuccessfully attempted.

THE PREVENTION OF TUBERCULOSIS.

Although our knowledge of the relation between human and bovine tuberculosis is far from complete, it has received important additions as the results of the recent tuberculosis congress, held in Paris, and from the report of a committee (medical and lay) appointed last April to enquire into the nature and extent of pleuro-pneumonia and tuberculosis in the United Kingdom.

There appears to be a concensus of opinion that there is greater danger of tubercle being propagated by the use of uncooked milk than from the use of meat from diseased animals.

The English committee recommend such legislation as will bring bovine tuberculosis under the list of contagious diseases. Legislation to this end has already been effected in France. The immediate slaughter of tuberculous animals is strongly recommended.

It will, no doubt, be some time before we can hope for such legislation in this country. We would direct the attention of the members of our different Provincial health boards to this all important matter. They can at least strongly urge the importance to the public health of appointing men to inspect our meat supply, who have the knowledge and experience

necessary to diagnose tuberculosis in the lower animals. It is lamentable that at present this important task is left to butchers.

THE TOE REFLEX.

Dr. Wharton Sinkler, in a recent number of the *Medical News*, describes a peculiar form of tendon reaction seen in cases of pressure myelitis and secondary lateral sclerosis. It is elicited by strongly flexing the great toe while the lower limbs are extended. Immediately after this manœuvre is performed, the foot becomes flexed, then the leg, and finally the thigh is flexed on the pelvis. At once there follows a return to the formerly extended position of the limb. The contractions occur after forcible and gentle flexion of the toe. In all the observed cases, the ordinary tendon reactions were also much exaggerated.

It is an entirely different phenomenon from Westphal's paradoxical muscular contraction. The latter is brought out by flexing the leg on the foot, when, if present, the foot will be kept in a state of flexion even for some minutes, owing to a tetanic contraction of the tibialis anticus muscle.

STRYCHNINE IN NARCOTIC POISONING.

Dr. Gibson of Edinburgh, in the current number of the *Practicioner*, tells us that he has had much success with the action of strychnine in narcotic poisoning, especially in opium narcotism. He points out the danger of using atropine in these cases. There can be no doubt that the action of atropine as a physiological antagonist to lethal doses of opium has been much overrated. As atropine given in excess paralyzes the respiratory centre, it is clear that the borderland between a stimulating and depressing dose may be overstepped, and as result we have the depressing action of artopine added to that of opium. No such danger is to be feared from the employment of strychnine—even in excess.

As a stimulant to the respiratory centre strychnine is now believed by many to be fully equal to atropine, and as it is free from the dangers attending the administration of the latter in larger doses, it should be employed in preference to

it. Dr. Gibson condemns the method of keeping a narcotised patient awake by walking him about as dangerous. It does certainly appear to be a crude and exhausting way of keeping a person awake. The same end, without exhaustion, may be obtained by the use of the electric brush. An important point to attend to in the treatment of opium poisoning, is to feed the patient and prevent the loss of heat.

—From the numerous instances of a history of injury given by parents in cases of polio-myelitis, it is fair to assume that this disease may be at times due to traumatism. At a recent meeting of ths Medical Society of London, Dr. C. E. Beevor exhibited a boy, aged 12, who presented the symptoms of a limited atrophic paralysis of the left arm and spinate muscles coming on after a fall on the left elbow joint. Owing to the absence of any history of anæsthesia, the cause of the paralysis was considered by Dr. Beevor to be due to a polio-myelitis. An important diagnostic feature in this case was a paralysis of the pectoralis major for one movement and not for another. The clavicular part of this muscle acted in the adduction of the humerus, but it failed to contract in raising up the arm when advanced. This would be in favor of a polio-myelitis, as muscles are functionally grouped in the grey matter.

NOTES AND COMMENTS.

In ancient Rome, the worship of Æsculapius, imported from Greece, was almost universal, and the brotherhood of the *Asclepiadæ* formed a vast organization, resembling in many respects the Christian priesthood, with temples, which served the double purpose of shrine and hospital. The temple of the God at Athens has recently been excavated, and in the *British Medical Journal* of Nov. 10th a tantalisingly brief account is given in an abstract of a lecture by Miss Jane Harrison " On Hospitals among the Greeks."

In his delightful story, *Marius the Epicurean*, Mr. Walter Pater gives an admirable description of the organization of, and modes of practice in, these great establishments, at one of which, in the Etrurian hills, Marius sought relief from some boyish sickness. A paragraph of the chapter is worth quoting

in illustration of the belief then prevalent, that all the maladies of the soul might be reached through the subtle gateways of the body—an attitude of mind so opposite to the latest development in therapeutics in which all corporeal ailments are attacked through the soul. "*Salus*—salvation—for the Romans, had come to mean bodily sanity; and the religion of the god of bodily health—*Salvator*, as they called him, absolutely—had a chance just then of becoming the one religion; that mild and philanthropic son of Apollo surviving, or absorbing, all other pagan godheads. The apparatus of the medical art, the salutary mineral or herb, diet or abstinence, and all the varieties of the bath, came to have a kind of sacramental character; so deep was the feeling, in more serious minds, of a moral or spiritual profit in physical health, beyond the obvious advantages one had of it; the body becoming, truly, in that case, but a quiet hand maid of the soul."

To a physician the touching account of the cure is heightened by the introduction of the great Galen, who was the most distinguished of the *Asclepiadæ*.

In a recent essay on *Society in Rome under the Cæsars*, Mr. Inge does not give a very pleasant account of the doctors, though we learn from him that there was one period at least in the world's history when large fortunes were common in the profession. Specialism was carried to an extent as great as in ancient Egypt and there were gynecologists, dentists, oculists, aurists, etc. No legal precautions were taken to prevent incompetent and disreputable persons from practising. Mr. Inge states that there is no direct evidence as to the ordinary amount for doctor's fee at Rome.

Literature has often been enriched by those who have deserted medicine for the muses. But to drink deep draughts at Pierian springs unfits, and when the thirst is truly divine should unfit, a man for the worrying rounds of practice. It is shocking to think that had Goldsmith secured the confidence of the old women in Bankside, Southwark, we should probably never have known the Vicar, Olivia, or Tony Lumpkin. Still worse, to think of what we should have lost had Keats passed on from a successful career at Guy's to obtain even a distin-

guished position as a London Surgeon! Happily, such men soon kick free from the traces in which the average doctor trots to success.

The most conspicuous modern example of success in both fields is offered by the autocrat of the Breakfast Table, who, for many years, occupied the chair of anatomy at Harvard, and who, as a young man, made permanent contributions to practical medicine. In his last book, *One hundred days in Europe*, he mentions having sat next to Mr. Lawson Tait at dinner and he suggests the question "which would give most satisfaction to a thoroughly humane and unselfish being of cultivated intelligence and lively sense—to have written all the plays which Shakespeare has left for an inheritance to mankind or to have snatched from the jaws of death scores of suffering women and restored them to a sound and comfortable existence? I know of no man who could so well make answer to this question as the Autocrat himself. Would he rather go down to posterity as the man who, in this country at least, first roused the profession to a sense of the perils of puerperal fever as an infectious disease—and who thereby has probably saved more lives than Lawson Tait—and whose essay on the subject—*pace* shades of Meigs and Hodge—is a classic in American medical literature, or would he chose to be remembered as the author of the *Pearly Nautilus* and *The Last Leaf*?

All this merely serves to introduce Doctor J. M. Crawford, of Cincinnati, who has been quenching his thirst by a translation of the Kalevala, a series of very ancient poems which form the national epic of the Finns, and which were first collected by two members of our profession, Doctors Topelius and Lönnrot. It is a most creditable piece of work, and competent European critics speak in the highest terms of the way in which the difficult translation has been rendered. When we consider how unproductive our homœopathic brethren have been—except in therapeutical literature—this contribution from a man who occupies the chair of Physiology in one of the western Homœopathic Colleges, is doubly welcome.

For the following, I blame that case of railroad delivery which has evidently given me a most fictitious reputation. A

few days ago I received an urgent summons to come at once to an address at the northern part of the town. On arrival I found my *confrère* looking very tired and distressed after an anxious night with a primipara. He greeted me with the information that one child had been born but that he did not know what to do about the second, as he believed there was hour-glass contraction of the uterus. I assured him that our course of action was clear ; we sent at once for an obstetrician. I had difficulty in convincing him that I was not a professor of the art, but he persisted that my reputation was associated in some way with obstetrics, and brought up that north-west case! What I have suffered on account of that baby! To be jeered at by the French journals, to be called by the editor of the *Medical Record* a narrator of funny stories, to be referred to by my friends as Munchausen—these things have been hard to bear, but on the strength of that case to develop a consulting practice in obstetrics, is indeed a warning. Hereafter I shall stick to my last.

WILLIAM OSLER.

Obituary.

RICHARD A. KENNEDY, M.D.

We regret to have to record the death of Dr. R. A. Kennedy, for many years one of the leading obstetric physicians of this city. He was born in this city, January 1st, 1840. Receiving his education in Montreal, he studied medicine at McGill University, and graduated in 1864. Almost immediately afterwards he began practice at Dunham, in the Eastern Townships, but remained only three years, as the field was too contracted and not congenial to his ambition. He returned to Montreal, where he practiced the remainder of his life-time. Dr. Kennedy was a most persevering worker, and soon had acquired an extended clientéle. When the Medical School of Bishop's College was founded, he was offered and accepted the Chair of Anatomy, but two years afterwards was transferred to that of Obstetrics and Gynæcology. This position was more to his liking, and he filled it creditably, earning the reputation of being a most con-

scientious teacher. He held this position, as also that of Registrar, until failing health compelled him to resign. Fifteen years ago he had a severe attack of hemoptysis, which compelled him to leave for southern Colorado, where he remained during one winter. He derived much benefit from his sojourn there, and returned in the spring. He immediately plunged into work again, and was soon busily occupied with one of the largest obstetric practices in the city. He was never free, however, from a slight cough, which he always said was due to his throat, and laughed at his friends, who warned him of over-fatigue and of the possible cause of his disease. He has often said his friends were wrong, and that he would outlive some of them. During the last six years he had several severe attacks of pleurisy, from each of which he took some time to recover. One year ago he decided to return to Colorado, where he remained three months, returning not at all benefited from his trip. He still, notwithstanding the remonstrances of his friends, kept to his work, and literally died in harness.

Dr. Kennedy was also one of the founders of the Western Hospital, and the success of that institution is largely due to his management in its early years. Although not a brilliant man, he was essentially an honest and thoroughly practical physician, and his opinion and assistance in obstetric cases were frequently sought by his brother practitioners.

Medical Items.

—Koenitz looks upon the presence of peptones in the urine of pregnant women as an almost certain sign of the death and maceration of the fœtus.

—Dr. Poore, in a lecture recently published in the *Lancet*, advances the opinion that it is not unlikely that all cases of acute yellow atrophy of the liver are due to phosphorus poisoning. Since the recognition of the marked changes occurring in the liver from taking phosphorus in over-doses, the cases of so-called acute yellow atrophy reported have been very few. If there is a true idiopathic acute yellow atrophy it is clinically indistinguishable from phosphorus poisoning.

Publisher's Department.

—Messrs. Eli Lilly & Company, of Indianapolis, have issued a work entitled "Handbook of Pharmacy and Therapeutics." The aim, as stated in the introduction, is to furnish the busy practitioner a reliable means of ready reference, at once concise, systematic and authoritative, to which he may refer with confidence in cases of doubt. Younger members of the profession and medical students will find this little work full of suggestions. It will be sent free to any physician, druggist or medical student by addressing Eli Lilly & Co., Indianapolis, Ind., mentioning this Journal.

MEAT *versus* SALT.—Science teaches us that salt meat has considerably less nutritive power than fresh meat. The same principle applies in a higher degree to a number of liquid extracts of meat, or so-called beef-tea, or bouillons, which are being offered to the English public at prices entirely out of proportion to their real nutritive value. Accoreing to analysis by Dr. Rudolph Sendtner, published by the Royal Analytical Institute of Munich, most of these liquid extracts contain only a very small proportion of real extract of meat, but an enormous quantity of salt, with the addition of some flavoring ingredient like celery, or similar stuff; and in analyzing five different sorts Dr. Sendtner obtained the following results:—

No. 1 being considered as one unit of extract of meat.
" 2 is equal to 1.62.
" 3 " 2.43.
" 4 " 2.84.
" 5, the real Liebig Company's Extract of Meat, being equal to 6.20.

And in calculating the quantity of salt added to the different sorts: No. 1 contains 77.83 per cent.
" 2 " 56.70 "
" 3 " 52.68 "
" 4 " 54.69 "

No. 5 (the Company's Extract) contains no added salt at all. This proves to a certainty that the consumer, in using these various sorts of liquid extract of meat (bouillons), pays mainly for a very strong solution of common salt, slightly flavored with some extract of meat and some other ingredient of no nutritive value. Beef-tea made from Liebig Company's Extract of Meat is therefore of far greater nutritive value as a stimulant, and infinitely cheaper at present retail prices. The winter season approaching, this seems to be a useful hint to consumers of beef-tea or bouillon, so as to enable them to get their real money-value.

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Original Communications.

ON THE NATURE AND PREVENTION OF URETHRAL FEVER.

BY JAMES BELL, M.D.,
Surgeon to the Montreal General Hospital.

(Read before the Medico-Chirurgical Society of Montreal.)

Ten years ago I read before this Society a short paper on "Urethral Fever," in which I called attention especially to the causation of the disease and its nature and prognosis. To-night I propose to discuss this subject from the standpoint of the practical surgeon, with special reference to its prevention in operative and instrumental interference within the urethra.

It will first be necessary, however, to define clearly what is meant by urethral or urinary fever, and to refer briefly to the theories held as to its origin. I do not intend to occupy the time of the Society in reviewing the literature of this subject, nor to refer to authors or individual opinions, but to state as briefly as possible the theories of the leading surgeons of the present day regarding the origin of this disease. All surgeons, and in fact most general practitioners, are familiar with certain forms of constitutional disturbance which follow instrumental or operative interference within the urethra. In a certain number of such cases pre-existing disease of the kidneys, ureters or bladder, or of all these organs combined, or the setting up of a true sepsis (pyæmia or septicæmia), or the production of the disease known as surgical kidney, may explain these symptoms.

But there still remains a large class of cases occurring in male patients of all ages, and often where no lesion of any organ can be discovered, even by post-mortem examination, in which instrumental or operative interference within the urethra is followed by the train of symptoms to which has been given the names urethral fever, urine fever, catheter fever, etc. These symptoms occur in one of four different forms.

(1) Shock, collapse and death within a few hours after operation (9 to 24), with or without chill or fever, and with partial or complete suppression of urine.

(2) A severe chill with high fever occurring a few hours after operation, and usually following the first act of micturition. Profuse sweating and prostration follow, but the whole disturbance lasts only from a few hours to two or three days.

(3) Recurrent chills and high fever coming on at irregular intervals and lasting perhaps for weeks or months.

(4) A moderate fever with slight chills or chilly feelings accompanied with great depression, low muttering delirium or semi-coma, dry, cracked tongue and anorexia, and usually ending fatally. Such cases occur only in old men with enlarged prostates, and in whom, as a general rule, attempts at catheterization with solid instruments have resulted in the formation of false passages just in front of the prostate and on the floor of the urethra. This form differs materially from the preceding ones, but clinical experience points strongly to its being identical in its origin.

The second and third classes of cases generally recover completely and satisfactorily. Although this subject has occupied the attention of some of the leading surgical minds of this century, especially in France, Germany and England, its pathogenesis has never been satisfactorily explained. Three distinct theories have been advanced as to its origin.

(1) That it is a septic process.

(2) That it is due in some obscure way to reflex nervous phenomena.

(3) That it is due to uræmia.

In December, 1883, Sir Andrew Clark, in an able and

exhaustive paper entitled "Catheter Fever," read by him before the Medical Society of London, submitted certain propositions which called forth a very spirited discussion, in which Sir Henry Thompson, Mr. Savory, Mr. Berkeley Hill, Mr. Reginald Harrison, and others took part. No definite conclusions, however, were arrived at, the speakers being pretty evenly divided in their advocacy of the different theories already mentioned. A very casual investigation of the subject will, however, show the utter inadequacy of any of these theories to explain the cause and nature of urethral fever. In its symptoms and in the absence of gross lesions it differs entirely from pyæmia or septicæmia, or other known septic process; there is no similar pathological condition produced by nervous disturbance, and it presents an entirely different picture from any known form of uræmia. The discovery of the animal alkaloids known as ptomaines and leucomaines, and the experiments of Dr. Bouchard of Paris from 1882 to 1886 upon the toxicity of the alkaloidal substances found in normal urine seem, however, to have given the key to a rational explanation of the origin of urine fever. From the amount of evidence which we now possess there can hardly be any doubt but that this disease is due to the absorption of the products of decomposed or decomposing urine from cut, lacerated or abraded portions of the urethra. It is not a septic process, but a form of poisoning closely allied to uræmia and due to the absorption of a toxic alkaloid produced by or during the decomposition of the urine. The clinical facts pointing to this conclusion amount almost to a demonstration. They are as follows:

(1) Urine fever is unknown after perineal lithotomy, external urethrotomy and internal urethrotomy in the pendulous urethra, and is far less frequent when the urethra is wounded on its roof than when it is wounded on the floor.

(2) When, after internal urethrotomy, the urethra and bladder have been carefully washed out with an antiseptic solution, urine fever does not occur until some time after urine has been passed over the wounded urethral surface, and is then of a mild type and generally free from danger.

(3) Operations upon the female genitals which wound or injure the urethra are not followed by any similar condition.

(4) Mr. Harrison of Liverpool has shown by a number of operations that when the bladder is drained by a perineal wound after internal urethrotomy that urine fever never occurs, and he attributes its origin to the absorption of the products of decomposing urine from wounds of the mucous membrane.

It is primarily with the object of contributing my experience in support of this important observation and adding my testimony in favor of the combined operation that I bring the subject forward to-night. I have records of five cases in which I have performed, within the past twelve months, the combined operation, and also of six cases of simple internal urethrotomy for stricture of the deep urethra performed within the same period of time. The five cases in which I drained the bladder by a perineal cystotomy were selected for this operation because of specially bad features in each case, as the detailed roports will show. The six cases in which I did a simple internal urethrotomy were, with one exception, not drained, because they were more favorable cases for operation. In the first series, in which I drained through the perineum, there was not in any case a subsequent rigor or rise of temperature, while in the six cases of the second series urine fever in a mild form followed in four cases, but only after micturition. Two cases only escaped, and in these I believe the result was due in great part to greater intelligence on the part of the patient in carrying out his instructions.

First Series—Cases of Internal Urethrotomy with Perineal Cystotomy.

Case I.—G. R., aged 33. Traumatic stricture of seven years standing, from a fall astride of the edge of a plank; unable to pass his urine in a stream for past six years; distended bladder and constant dribbling causing excoriation of legs and great discomfort. On examination, a stricture at the root of the penis which admitted a No. 4 sound (English) was discovered, as well as a deeper one at the end of the bulbous urethra, through which I could pass no instrument whatever, and around which a fibrous

nodule three-quarters of an inch long and as thick as the point of the little finger could be felt. On the 13th of March last a filiform guide was passed into the bladder and the deep stricture divided along the roof of the urethra by Guyon's Maisonneuve Urethrotome. Both strictures were then thoroughly divided along the floor of the urethra by Otis's divulsing urethrotome, so that a 34 (French) sound passed quite easily. A staff was then introduced and a median perineal cystotomy performed, through which a large soft rubber catheter was introduced and tied into the bladder. The bladder and urethra were then washed out with a weak solution of salicylic acid (1 to 1000) dissolved by the aid of borax. No chill or other bad symptom followed. The temperature never rose above 98½°F., and at the end of forty-eight hours the catheter was removed. On the sixth day sounds were passed again up to 34 (French). On the eighth day he was discharged, and on his return eight days later the perineal wound was completely healed and sounds were passed again up to 34 (French). This patient returned weekly for two or three months to have the sounds passed.

Case II.—A. S., aged 38, was brought to hospital in April last with a distended bladder and a history of stricture extending over four years and following a third attack of gonorrhœa. He had recently had retention on several occasions, and had had his urethra horribly torn and lacerated by repeated attempts to pass a small silver catheter. He was very ill and had a history of chills and fever for over a week before admission, his temperature being 102°F. when admitted. He also complained of pain and tenderness in his shoulders, and a localized extra-articular swelling rapidly developed over the point of each. Owing to his bad general condition, as well as to the condition of his urethra, no immediate attempt was made to pass an instrument, but, instead, his bladder was emptied by aspiration. Next day, on examination, he was found to have a series of strictures extending from the meatus to the deep urethra—the deepest one being, as usual, the tightest. There were also many false passages in the floor and sides of the urethra which discharged bloody and watery pus. With much difficulty a rubber filiform guide was

passed and the strictures treated by internal urethrotomy and perineal drainage, as in case I. No chill followed the operation, but the temperature remained high (99°–103°F). This patient was undoubtedly suffering from a pyæmic condition on admission, the course of which was not unfavorably influenced by the operation. The perineal catheter was removed on the fourth day, and on the thirteenth day the patient insisted upon leaving the hospital and was not heard from again. I may add here that his employer stated that he was an inveterate drunkard.

Case III.—J. T., aged 40, seaman, had a traumatic stricture of nine years standing following a fall into the hold of a ship and landing astride of the edge of a barrel. A hard fibroid mass as large as a crab-apple was felt on the perineum in the situation of the bulbous urethra, and corresponding to this mass within the urethra was a tough strictured ring which admitted with difficulty the point of a No. 2 sound. This case was treated in the same way as the two preceding ones, and with excellent results. No chill nor elevation of temperature followed the operation. The perineal catheter was removed on the fifth day, and the wound was perfectly healed ten days later. Sounds were again passed at the end of a week up to 34 (French), and the patient was discharged about four weeks after operation. His residenee in hospital was somewhat prolonged on account of two attacks of the nature of renal colic, distinctly referred to the region of the left kidney, and accompanied by elevation of temperature—once as high as 104°F. The first of these attacks occurred fully two weeks after operation, and could not therefore be attributable—at least directly—to it.

Case IV.—A. A., aged 42, was operated upon on the 29th of November last. He had a traumatic stricture of the deep urethra caused by falling from a ladder and landing astride of a steam-pipe four years ago. One year after the accident he was treated in the hospital by gradual dilatation, but he states that whenever an instrument was passed he soon after had a chill, followed by fever and sweating, and was ill for some days. For over two years his urine had been dribbling away, and his condition in consequence was a very miserable one. The stricture

was very tight, only admitting the filiform guide with difficulty, and was surrounded by a fibrous nodule distinctly appreciable externally. He was treated in the same way as those already mentioned, and without chill or fever. The perineal catheter was removed on the eighth day and sounds again passed up to 34 (French). His convalescence was delayed by an attack of orchitis, but the perineal wound was healed completely within a month.

CASE V.—J. C., aged 46, had a tight stricture of the deep urethra, which he attributed to riding long distances over a rough country. It was also treated seven months ago by internal urethrotomy and perineal drainage, and without chill or fever.

Second Series—Cases of Simple Internal Urethrotomy.

The following cases were all treated by internal urethrotomy alone. The patients were prepared in every case by a purgative given the night before the operation. The filiform guide of the small Maisonneuve instrument was first introduced, the patient then anæsthetized, and the stricture cut on the roof of the urethra by this instrument and dilated by tunnelled bougies passed along a metallic guide so as to admit Otis's instrument. The stricture or strictures were then cut on the floor by this instrument and sounds passed up to No. 34 (French). The bladder was then emptied by a soft rubber catheter and washed out with a warm salicylic acid solution (1–1000), and the urethra thoroughly irrigated with the same. The patient was instructed to hold his water as long as possible, and in no case did symptoms of urine fever follow until after micturition. Sounds were not passed again for a week and all did well, but with this exception of cases I and II, every patient had one or more chills with fever and sweating within the first couple of days after operation.

CASE I.—J. D., aged 26. Very tight stricture of bulbous urethra of three years standing, due to gonorrhœa. This patient did not pass any water for twenty-four hours after operation, and had no chill.

CASE II.—J. E., aged 36. Stricture of deep urethra of six years standing. Urethra very irritable and subject to spasm,

so that the instrument could not be passed without an anæsthetic. I dilated twice under anæsthesia with the greatest ease up to 28 (French), but the spasm returned immediately after recovery from the anæsthetic, and there was then no apparent improvement in the stricture. Both of these dilatations were followed by chill and fever. Under these circumstances I decided to do an internal urethrotomy. This patient retained his water for twelve hours after operation, and had no chill or fever. He made an excellent recovery.

Case III.—P. R., aged 40, seaman. Two deep and very tight strictures. Chill and rise of temperature twenty-four hours after operation. Subsequent progress uninterrupted.

Case IV.—V. S., an old man aged 68, with a history of treatment for stricture extending over twenty years. This patient's urethra was literally beaded with fibrous nodules varying from the size of a pea to that of a marble, and extending from the glans penis to the margin of the anus. His bladder was distended and overflowing. He declined to submit to any external operation. With great difficulty I succeeded in passing a filiform guide and cutting the strictures as in the preceding cases. He did not pass any urine for about fourteen hours. He had, nevertheless, a series of three or four chills with high fever and perspiration commencing about thirty-six hours after operation and lasting for about a week. The attack of urine fever was in this case very severe and alarming, considering the age and condition of the patient. This patient remained well for six months, when he contracted an acute choleraic diarrhœa, and died after a week's illness. There was no autopsy.

Case V.—E. P., aged 33. Tight stricture of deep urethra of two years standing. Internal urethrotomy. Chill and fever twenty-four hours after operation. Rapid and complete recovery.

Case VI.—E. V., aged 22, West Indian negro. Stricture of deep urethra of three years standing and following gonorrhœa. Patient at time of operation under treatment for early secondary syphilis. Internal urethrotomy. Chill and fever forty-eight hours after operation. Rapid and complete recovery.

In illustration of that form of urine fever which occurs in old

men, I will mention briefly three cases of enlarged prostate in old men in whom ineffectual efforts to pass solid instruments had resulted in severely wounding the deep urethra just in front of the prostate gland. These cases came under my observation in the hospital during the winter session of 1887 and 1888. The first two cases came from the country, and did not come under my care for several days after the injury to the urethra. Both were suffering from a low form of fever when admitted to hospital. They were both treated expectantly, the urine being regularly withdrawn by a soft catheter, but both died comatose after three or four weeks of low fever with occasional slight chills and profound nervous depression. In one only was an autopsy allowed, but no lesion was discoverable. The third case, very similar to the foregoing, was admitted two days after the injury to the urethra, and two days later, as there was some pus and great difficulty in catheterization on account of the false passages, a perineal cystotomy was performed and the bladder drained through the perineum for three or four weeks. He recovered slowly, but perfectly, although he still suffers from prostatic obstruction.

From a careful observation of the foregoing and many other similar cases, I venture to submit the following conclusions:

(1) That urine fever is a consequence of the lodgment and decomposition of urine in contact with wounded urethral surfaces, the inference being that the absorption of the product of decomposition which takes place from the wounded surfaces, and which could not occur through the normal urethral mucous membrane, is the direct cause of this condition. Mr. Harrison has also shown that patients whose urine contains a diminished quantity of urea are less liable to urine fever after operations upon the urethra.

(2) Urine fever is *absolutely preventable*, either by preventing the decomposition of the urine in contact with urethral wounds, or by providing a dependent drain so that it cannot lie in contact with wounded urethral surfaces long enough to decompose.

(3) That a perineal cystotomy is a simple and easily performed

operation, which does not materially add to the risks attending urethrotomy, and is not followed by unpleasant results if the drainage-tube or catheter be not too long retained in the perineal wound.

(4) That decomposition of urine can be delayed for a considerable time by thorough cleansing of the urethra and bladder by injecting with a weak antiseptic solution (salicylic acid or sublimate) after operation. This, with the precaution on the part of the patient of abstaining from passing urine for as long a time as possible, will greatly lessen the frequency of occurrence of urethral fever and diminish its risks. Repeated washings of the urethra in this way after each act of micturition for a few days would probably prevent the attack of fever altogether.

(5) Quinine, aconite and other drugs may be of use when urine fever has occurred, but they are powerless in most cases to avert it.

(6) Patients with enlarged prostate whose deep urethra have been lacerated by the passage of solid instruments should be treated by perineal cystotomy at once in order to arrest urine fever (or sepsis), either of which is likely to occur as soon as the patient is able to evacuate a part of his urine without the catheter.

DO BENIGN TUMORS BECOME MALIGNANT?*

By John B. Harvie M.D.,
Physician to Troy, N. Y., Hospital.

(*Read before the Troy Medical Association, Dec 4th*, 1888.)

There is no doubt but that the different growths which are found in other structures and parts of the body are capable of affecting and producing similar results in the breast. At first sight it would seem probable that a benign and unmalignant formation would never result in anything more than what it originally was. That a formation or neoplasm would remain and continue as it primarily began and never transform or change into anything else. When we have the poison of measles sown in the system we expect to find measles re-

*Do tumors of the breast, which may be classed as benign, ever become, by metaplasia, malignant; and if so what tumors are subject to that change?

sulting from said contamination and not diphtheria, consequently if we have a simple non-malignant tumor of the breast, " or any other part of the body for that matter," we do not naturally look for the subsequent development of something which is essentially different in character, microscopical appearance and result as regards the patient.

Benign tumors of the breast have, until recently, been brought under one general class and named adenomata. Recent observers have, however, dissected out the subject fairly well, and have placed each species under a head of its own, according to the microscopical appearance and tissue of which it is composed. To the practical surgeon, however, a diagnosis is not always very easily arrived at. To distinguish between malignant and non-malignant growths, even in a situation so favorable for manipulation as in the breast, is a problem which occasionally taxes the ingenuity of the most experienced, and it will be found impossible to avoid error at times. It may be laid down as a rule, however, that the nearer the structure of a growth approaches the normal physiological tissue the more probable is it that such a formation is non-malignant, and the wider the channel the greater the possibility of malignancy.

In regard to the development of neoplasms whether they are of epithelial or connective tissue origin the question arises must they originate and increase by proliferation of the tissue which they represent, or can a cell of one series give origin to one essentially different, or may the result of multiplication be modified by the presence of cells of different systems on the same principle as if we plant certain kinds of vines in the same bed, such as cucumbers and citron we shall have resulting a fruit which is altogether unlike either one or the other.

The metamorphosis of the connective tissue corpuscles by what is known as epithelial infection or inoculation has been regarded by some as a very probable theory. How this infection might arise and what might cause it is as mysterious as the transformation which takes place in the fruit.

In regard to the origin of tumors the theory which stands out

most prominently, and the one most generally accepted, is that of local origin. The most recent theory, that of Cohnheim, demands an accumulation of dormant embryonal cells as such a cause. Cohnheim supports this view by experiments, in which he transplants foetal tissue into a mature animal with the result of excessive development of that particular tissue. Same practised after birth gives a negative result. Growth possesses for its active element cells and cells are propagated only by segmentation or pre-existing cells. Tumors have failed to be propagated by inoculation. Experiments have been tried time and again on individuals and animals without showing any result. Cohnheim thereupon returns to this theory that the morbid growth must spring from embryonal cells, and that as ovum, by segmentation, gives origin to different varieties of normal tissue, different in function and structure, so we may have produced abnormal varieties of tissue, with like divergent manifestation of function. It is further assumed that the elements from which a tumor arises are of an indifferent character, and that the result of the growth, what its character, etc., may be, is influenced in some way by the condition and circumstances at the time.

What part predisposition takes in favoring the development of simple neoplasms of the mammary gland is probably disputable. Family history, however, plays so important a role in the predisposition to the development of other affections that it seems as though it must be accepted as an important factor. The married state and the physiological transformation which takes place in the breast during lactation and pregnancy offer very slight, if any, contributing cause. Lactation, however, in predisposing to inflammatory and sometimes suppurative changes in the breast, may be followed by areas of circumscribed hardness, which may consist of cicatricial connective tissue holding in its meshes more or less glandular structure. Such a mass might, however, be classed with such as result from injury.

It seems almost probable that growths which are inclined to be innocent in character are, as a rule, confined to the connec-

tive tissue, and those which are malignant to the glandular portion of the breast. The growth and development of innocent neoplasms takes place within a capsule and does not involve the surrounding tissue; that of malignant formations the very opposite.

In considering the subject of why benign tumors of the breast are liable to become malignant by mataplasia, I should say that the lipomata and certain cysts are recognized as being uniformly benign, and that certain other growths, which are regarded as innocent, may, under certain circumstances, take on malignant action. What the occasion is which excites the intruder to change his coat and practically become a horse of another color is still a mystery.

Benign growths sometimes assume very great dimensions, but never affect any alteration in surrounding tissue except that of displacement of parts and atrophy through pressure. They are essentially local in their development.

Sometimes tumors, by their peculiar behaviour, answer all the requirements of a malignant growth, while structurally they retain the proper arrangement to entitle them to a position within the harmless fold. As to what tumors may become malignant by metaplasia I should regard those known as fibroma, a fibrous tumor, myxoma or mucous tumor, and adenoma, a glandular tumor, as those which are most likely to take on cancerous action. That form known as chondroma, a cartilaginous tumor, bring very rarely, if ever so.

All tumors are subject to degeneration, decay and death. They may inflame, suppurate and die, resulting in a mass of chronic inflammatory tissue, penetrated by sinuses from all points and absolutely refusing to heal. And it is an indisputable clinical fact that those growths which are earliest in reaching maturity are the first to show signs of decay, and it is further shown by experience that the tumors which attain maturity most rapidly, even though they be ever so benign at the outset, are more prone to undergo a cancerous degeneration. The slower the growth the more likely will it be to remain benign.

If a tumor be purely of a fibrous character, its growth will inevitably be slow, and the possibility of any malignancy may almost positively be disregarded, but if such a growth should be the seat of vegetations or fibro-cystic in character then it increases in dimensions much more rapidly and indeeed is sometimes a strong rival of carcinoma itself.

The disposition of fibro-cystic growths to take on malignant action must not be overlooked. It is possible that a neoplasm might remain innocent throughout its entire structure for many years and become the subject of cancerous deposit. Erichsen reports such a case. The tumor had existed more than twenty years before removal, having commenced at the age of twenty-eight, but after extirpation cancerous matter was found at the bottom of some of the cysts, which, as the constitution was uncontaminated, was doubtless of recent formation, and the surface of the fungus was epitheliomatous.

The neoplasm known as myxoma or mucous tumor appears so seldom that its appearance is regarded almost as a curiosity. Its growth is somewhat rapid and is disposed to recur after removal. On account of the limited number of these neoplasms which have been recorded and the imperfect history of the cases, it is not known what percentage, if any, assumed malignant action.

The adenomata are also very rare growths. This species is probably more prone to undergo cystic degeneration than any other form of tumor. It is also more liable to recur after removal than any one of the simple neoplasms. Its progress is usually very chronic but occasionally assumes great rapidity of growth, thus almost simulating malignant disease. Although recurrence after removal in this form of neoplasm is quite great, still infection of neighboring organs seems to be very exceptional. When fatality occurs it seems to have been super-induced altogether on account of the local lesion or repeated operations and exhaustion in consequence rather than through any constitutional infection. Gross lays considerable stress on the liability of this form of tumor to become carcinomatous and considers the epithelium of the acini as the starting point.

Indurations of the breast in consequence of pre-existing mastitis are supposed to be a fruitful source for the development of malignant disease. Although these cicatrical masses may remain benign during the period of usefulness of the breast, still, when the age for the development of carcinoma arrives, and especially if any cachexia exists, the foundation of cancer is apt to be laid. Since the fact has been admitted that some forms of benign growths may assume malignant action it would stand almost to reason that any simple neoplasm which is liable to degenerate or take on irritative action may, providing the idiosyncrasy exists, become cancerous.

A CASE OF ACUTE SCLERITIS.

By R. W. Powell, M.D., Ottawa, Ont.

(*Read before the Ottawa Medico-Chirurgical Society, Dec. 14th*, 1888.)

An interesting case of this somewhat uncommon affection, running a rapid and successful course, having recently come under my notice I have thought it might not be uninteresting to relate it to you. I find rather scant notice of the disease in the works I have consulted, and some authors do not mention it at all, but those who do, state that it is rare, is often an outcome or a manifestation of a gouty or rheumatic diathesis in those cases of non-traumutic origin, and Alb states it is not unusual at the climactric. Most authors, however, state it is more common in men than women. A deeper insight into its pathology is not accorded to us. It is said to be rather obnoxious to treatment and inclined to run a chronic course and be prone to relapses, often lasting in this irregular way over many months.

In my case, a woman, the climacteric is just now on. She is not a gouty or rheumatic subject, has no special diathesis that I know of, has always been very healthy, except occasional indigestions. I put down her recent attack of scleritis to a severe mental shock, causing a peculiar harassing distress, and when I tell you that my patient was the mother of the victim of our recent terrible tragedy in connection with the balloon ascent this September, you will readily admit that I have good

ground for my premises as far as the mental shock is concerned.

On October 9th, 1888, Mrs. W. consulted me at her house for symptoms of marked apepsia. She was worn, haggard and depressed, and looked the picture of misery, and complained of no appetite, little sleep, constipation, disinclination for exertion, and an aversion to going out of the house or seeing her friends. She had some distress after eating and much flatulence and a feeling of fulness. Moderate headache.

I put her on appropriate treatment to meet these indications and in a fortnight she was much relieved and able to take a simple tonic. I discontinued my attendance after only three or four visits and thought little about it, the last time I saw her being about November 1.

On November 19th I was sent for. She then complained of a hemicrania, right side, the pain concentrating towards the orbit; had been present about three weeks and was gradually getting worse and more fixed towards the orbit. The globe of the eye was painful now and felt tense to her and rather too large for the socket. Sight slightly dim on that side. Pupils equal and no symptoms of glaucoma, unless the dimness of sight be so considered in a minor degree. On the sclerotic, towards the inner canthus, was a pink, injected spot about the size of a split pea.

The pain this day was very severe and made her feel sick and was accompanied by supra-orbital pain also. I gave her a saline cathartic, kept light away from the eye, gave her a belladonna ung. for brow application, atropine drops for the eye and powders of quinine and calomel night and morning. Early in the morning, two days afterwards, I had a hasty message that she was worse and could not see at all. On my arrival I was horrified at the appearance of the eye. The inflammation had extended completely around the cornea and no white of eye was to be seen. The whole globe looked like raw beef. The conjunctiva was in a state of marked chemosis—no lachrymation, no discharge, pupil sluggish and not very much dilated, and sight practically gone, though she could distinguish

light, but light increased the pain which was now very severe. Feeling very anxious I increased the strength of the atropine drops, directed her to steam the eye every two hours, kept light away by a light bandage, blistered the temple and told her to continue the quinine and calomel.

Nov. 23*rd.*—Pain diminishing. Chemosis declining. Florid injection of vessels of sclerotic and conjunctiva paling; sight rather better, can see the sashes in the window; blister discharging well.

Nov. 25*th.*—Symptoms all better; pupil well dilated and sight dim in consequence, but she can distinguish my hand and fingers; pain not nearly so great and inflammation resolving. Ordered an ointment of yellow oxide of mercury to be placed in the eye night and morning. The gums being tender and teeth painful I discontinued the calomel and gave her pot. iod. and pot. chlor. internally.

Nov. 28*th.*—Inflammation subsided. Pain nearly all gone. Sight now only dim, I believe from dilation of pupil and paralysis of accomodation by the atropine.

Nov. 30*th.*—Practically well; only the faintest tinge of conjunctiva congestion (light pink). Stopped atropine, but continued yellow ung. Had a general headache and could not sleep. This symptom was relieved completely by twelve gr. antipyrin at bedtime.

There is little more to be said. The case made an uninterrupted recovery and a few days after I changed the yellow ung., which smarted a little, fliching in *calomel à la vapeur.*

Dec. 3*rd.*—Can now see well. The atropine being stopped for two or three days pupil is almost equal to its fellow. Has a good appetite, sleeps well, is bright and cheerful and anxious to go out. I gave her the usual precautions as to windy, cold weather and so left her.

Dec. 11*th.*—Visited her to reassure myself. She has been out several times and no difference can be detected in the eyes.

I will not enlarge further on this case except to say that it ran an unusually rapid course and had a most encouraging termination. I believe that its main cause was a mental shock,

causing a real depression of spirits, amounting almost to melancholy, during which time, through mal-assimilation, the nerve centres were very badly nourished, and all this occurring just at the climacteric. At one time I was afraid that possibly I had to deal with a florid glaucoma—indeed on Nov. 21st I half feared a fulminant glaucoma. The treatment was, of course, on orthodox principles, and the result left nothing to be desired.

ON SOME FORMS OF PARLYSIS AFTER TYPHOID FEVER.*

By George Ross, M.D.,
Professor of Clinical Medicine, McGill University.

In a short communication relating to some of the surgical sequels of typhoid fever, Sir James Paget says:

"I do not feel competent to deal with the question whether each fever has, as seems probable, its own proper sequels, and in this sense, though perhaps in less degree, as specific as in its fever-period; but I have not yet seen either periostitis or local paralysis of muscles after any other than typhoid fever, or a fever which I suppose to be closely related to it, and I have not seen after typhoid any corresponding number of cases of large lymph glands, diseased joint, or other diseases of mere debility, such as may follow any acute illness."

And he quotes the remark of Dr. Baly, to the effect that "a book on the diseases of convalesence might be one of the most valuable that any physician could write." A consideration of the truth of this remark has led me to lay before the Association a few notes upon the important subject of paralysis following typhoid fever.

It is an interesting question how far these so-called sequels or well-defined disorders occurring during the convalescence from fevers and other acute diseases are special or confined to certain of them only, and how far others may occur in a similar relation to several of them. Certainly, in many instances, the latter is found to be the case, as, *e. g.*, otitis

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media after both scarlatina and measles, whilst, again, some peculiar local derangements seem to follow in the wake of a particular fever, and to bear no similar relations to any other, *e. g.*, paralysis of the palate following diphtheria. So with peristotis after typhoid, which may occur in many situations. I have seen it several times on the tibia, once leading to severe necrosis, often on the ribs, and twice on the surface of the sternum. So with the affections of the nervous system, the most common form being of the muscles supplied by the peroneal or anterior tribal nerve, whilst more extensive paralyses are decidedly uncommon. The very peculiarities of the parts affected, and the frequency with which they are attacked in preference to all others, show certainly a predilection for them which must give the stamp of specificity.

It is not to be wondered at that the nervous system suffers in many ways after the prolonged disturbance to which it is subjected during a siege of typhoid fever. Indeed, it would be remarkable if derangements of the nervous functions were not often witnessed under these circumstances. In a certain proportion of all cases of this fever, the incidence of the poison seems to be upon the nervous system, as is evidenced by the occurrence of cephalalgia, insomnia, delirium, tremors and debility. As a sequel of these profound and prolonged disturbances in the nervous system all patients who have thus suffered are left in a condition of very marked asthenia, and it is a long time before they are in a condition to bear any, even moderate, amount of either bodily or mental fatigue. These signs of exhaustion of the nervous system are constant, and generally in proportion to the severity of the fever and the degree to which its violence has fallen upon that portion of the mechanism. But, apart from such general functional diminution, there are, in exceptional cases, signs that certain isolated, and often strictly localized, portions of the nervous system have suffered out of all proportion to the rest, and in them the impairment of function may reach a high degree. Thus, the cerebral cortex may be the part chiefly affected, and we observe, even after full convalescence has set in, that the mental functions remain imperfect,

and hallucinations and delusions may persist for a very considertime—or, as concerns us most at present, some part of the spinal cord, or some one or more of the spinal nerves, exhibits altered function.

It is, however, a fact that although these sequential paralyses are more frequently observed after somewhat severe attacks of typhoid, yet they do not specially occur when the fever has been marked by an excess of nervous disturbance. Nor can any such predisposing cause as the influence of country or of a neurotic temperament be shown to play any part. The nervous phenomena, almost invariably, are both motor and sensory, presenting paralysis with either pain or anæsthesia. This has always been observed in *spinal* nerves, and has not been seen in any of the mixed (motor and sensory) central nerves. According to Nothnagel (*Deutsch. Archiv für klin. Med.*, 1872), from an examination of recorded cases, the following is the order of frequency of these affections: (1) The parts supplied by one nerve or branch of a nerve, with special predilection for the ulnar and the peroneal. (2) Paraplegia generally confined to the lower extremities, but not very infrequently involving an upper extremity—sometimes both arms and legs—sometimes one side more than the other. (3) Less frequently, one extremity, either upper or lower, or two extremities in crossed order. (4) Simple alterations of sensibility; if looked for, these will be found *very frequently*, though not so striking as the cases with combined paralysis and anæsthesia. They are observed chiefly in the lower extremities and especially in the feet.

From a consideration of many cases of paralysis after this fever, it may be inferred that the mode in which it is produced is by no means always the same; that, indeed, the effect of the poison is exerted sometimes upon some of the great nervous centres, especially of the spinal cord, and at other times upon the structures of some special and individual nerve or nerves. Jaccoud, *e.g.*, speaks of paraplegia being due to *œdematous infiltration* of the parts in the vertebral canal, and is of opinion that even prolonged *exhaustion* of these centres without organic lesion may be the cause of a motor loss enduring even for a con-

siderable time. Prof. Biermer relates an important case, in which he finds difficulty in deciding between acute poliomyelitis anterior and multiple degenerative neuritis, there having been pain, motor paralysis, good sensation, diminished electrical reaction, atrophy, and bed-sores, a tedious illness of several months, and, finally, complete recovery. As the tendency in all these cases is toward recovery, their pathology is necessarily scanty and founded upon what is better known about recognized lesions whose symptomatology is somewhat analogous.

The commonest variety of post-typhoid paralysis is that which is confined to the district supplied by one nerve—*e.g.*, the ulnar, peroneal, or the circumflex. Here, it is extremely probable that two distinct pathological conditions may exist. There may be a true interstitial neuritis or there may be an acute parenchymatous change in the nerve elements. The two varieties are separated from each other mainly by the presence or absence of *pain*—this symptom being a marked feature in the former, owing to the pressure exerted upon nerve filaments, and being absent in the latter where this condition does not exist; the main feature, however, the loss of power in the supplied muscles, being equally present in them both. It has been suggested by a recent writer (Thomson) that a similar acute parenchymatous degeneration is to be looked upon as explaining that common post-febrile paralysis, the diphtheritic, and the view has much to commend it.

It is not unusual after typhoid fever of considerable severity to find a definitely enfeebled condition of the lower extremities persisting for some time, and sometimes a person never entirely recovers his capacity for walking long distances. Such paretic cases have never been specially studied, but it is probable they would if any should fall under the head of defective innervation from prolonged exhaustion of the nervous centres.

The most important, however, of cases of post-typhoid paralysis are those of paraplegia, confined sometimes to the lower extremities and sometimes involving these together with some other parts. Well-marked cases of this kind are sufficiently unusual, and one may see several hundreds of cases of typhoid

fever without meeting with a single example. Not much has been written upon it, and in some articles very dissimilar conditions are probably included under the same description.

The following case is a striking instance of a very severe form of paraplegia directly resulting from typhoid fever and still ending in complete recovery :—

Julia L. was brought by the ambulance to the Montreal General Hospital on the 8th of November, 1887. The following account of her illness was obtained from her attending physician. She complained on September 1st of headache, feverishness, pains in the limbs, and a short hacking cough. After one week took to her bed. Was first seen by her physician on September 12th. At this time she had a severe cough with whitish expectoration ; moderate distension of abdomen, aed gurgling in right iliac fossa. Temperature 102°F. The disorder ran the ordinary course of a moderately severe attack of typhoid fever without complication. Patient remained in bed until October 25th, when she got up, went about the house for three or four days and was apparently convalescent ; appetite good, sleeping well, and gaining strength rapidly. On October 29th temperature rose to 102°F. and she began to suffer from severe pains in the legs. The lower extremities were very sensitive, the patient not being able to bear any motion of the bed-clothes. The legs were flexed on the thighs and the thighs on the pelvis, any attempt at extension being very painful. At this time had incontinence of urine for one day. The skin over the left trochanter and sacrum very soon became red, and in two or three days a large slough, about two inches square, had formed in both these situations. The skin over the right trochanter also became reddened, but did not slough. The temperature soon became normal and remained so.

On admission, much emaciated and anæmic ; face pale ; eyes brilliant, pupils dilated and equal ; expression anxious and haggard ; skin dry and harsh, cool ; tongue clean and moist ; abdomen retracted, not tender on pressure. Lies on right side with legs and thighs flexed. Some œdema of left foot. Numerous small purpuric spots on both legs from knees downward. Great

wasting of muscles of both lower limbs, thigh and leg; both knees are rigidly bent; any movement to relieve the contraction is extremely painful. Marked paresis in all attempted movements of foot, leg, or thigh. She is unable to hold up either leg from the bed without support. Much tenderness on pressure upon the muscles of the legs and thighs. No anæsthesia. The skin over the two malleoli somewhat reddened. Plantar and abdominal reflexes present. There is a large bedsore over the lower part of the sacrum, about two inches square, covered with a hard, black slough, and with inflamed edges. There is a similar slough on the left trochanter, and the skin over the right trochanter is reddened but unbroken. Pulse feeble and rapid, but regular. Temperature normal. In lungs, many moist sounds heard at both bases, chiefly in the left. Urine contained a small amount of albumen. Complains of pain over the bedsores and weakness. Eats well. Sleeps soundly. Urine and fæces passes naturally. Is very feeble and resents being moved or stirred. She was put upon a water-bed and the bedsores poulticed, and was given quinine, good diet, and a small allowance of stimulants. The sloughs soon separated and the sores were dressed with balsam of Peru and iodoform; they slowly granulated and finally healed. The contraction of the knees obstinately remained. In February the legs were gradually extended by means of weights and pulleys. By this means they were brought down until the legs were quite straight. During this time motor power was slowly returning and pain quite disappeared. After a time she could stand upright and perform flexion and extension movements of the feet and legs. Improvement was then rapid, and she was discharged March 1, 1888, able to walk nicely about the ward. She has since remained well and strong.

During apparent convalescence there occurred severe pain in the limb, marked tenderness of the skin and muscles, no anæsthesia, diminution of superficial reflexes, loss of electrical contracility, extensive bedsores, loss of power to a great extent but never complete, contractures, no disturbance of sphincters. The case looked very unpromising and it was only the known tendency of these cases toward recovery and the probability

that the lesion was really in the nerve-trunks, and not in the spinal cord itself, that enabled a somewhat favorable opinion to be entertained.

The second illustrative case is still more remarkable inasmuch as it presents an example of unusually extensive paralysis after typhoid—the nervous disorder involving all the limbs, and, in addition, the palatal muscles after the manner of diphtheritic palsy.

Ernest H., æt. fifteen years of age, was admitted under my colleague, Dr. Wilkins, into the Montreal General Hospital on the 26th of March, 1888, suffering from typhoid fever of a few days' standing. The case presented no unusual features and was of a rather mild type. On the twenty-fourth day of illness the temperature was 99°, and in a few days it reached and continued at the normal figure. About this time he found that he spoke with some difficulty—that is to say the effort required for speech was greater than it should be; it was noticed that his speech had a nasal intonation, There soon followed a sense of numbness in the ends of the fingers and in all the limbs; the weakness being greater upon the left side than upon the right. By the 4th of May he lay in bed without power to raise either leg from the bed; the head and arms were raised with great difficulty, and the grasp was very feeble. There were no pains in the extremities. The voice was quite nasal, speech was difficult, and swallowing required an effort and occasionally produced regurgitation. The velum palati was relaxed and insensitive. Knee-jerk absent in both legs. Tactile sense good. Muscles of lower extremities react normally to the faradic current, but somewhat slowly to the galvanic current. Muscles of the upper extremities react three times as strongly on the left side as on the right side. Eyes examined by Dr. J. J. Gardner: "Pupils react to accommodation and light, but somewhat lazily to light. Accommodation unimpaired. External ocular muscles act well, no weakness of internal recti. Fundus normal." He remained in this condition of extensive paresis, under treatment by means of galvanism and strychnia for several weeks, being removed by

his friends on the 27th of June, 1888. At this time the limbs had improved in power to a moderate extent, and the nutrition was better, the voice was less nasal.

Gowers (*Diseases of the Nervous System*, vol. ii.) alludes to similar cases, but mentions that, as diphtheria is known sometimes to accompany typhoid fever, so a paralysis in reality of diphtheritic nature may be observed as a sequence of such a compound attack; and the question may be raised whether H. did not have diphtheria. There is no proof that he did have throat affection of any kind; and, on the other side, he was, during the whole time, under skilled attendants in a hospital, and nothing was ever noticed or complained of which led to an examination of the fauces. It may, therefore, I think, be safely held that no diphtheria complicated the case. I would also recall, as strongly corroborative of the same view, that there was no disturbance of accommodation, and no albumen in the urine.

Although actual observations are not very numerous showing presence of the lesions of peripheral neuritis, and the absence of change in the spinal centres in cases in which post-typhoid paralysis has existed, yet they are sufficient to substantiate the occurrence of such a disorder. Indeed, in the light of the somewhat remarkable observations recorded by Pitres and Vaillard (*Revue de Médicine* t. v., 1885), we may be well surprised that the clinical evidences of neuritis are not more frequently met with. These writers made careful and extensive histological examinations of peripheral nerves in various parts of the body in cases of typhoid fever which had proved fatal from various causes, but in none of them there had, at any time, been evidences of nervous lesion or disorder. The result was, in every case, to find microscopical evidence of well-marked changes in the structure of most of the nervous trunks and their branches, whilst the actual nerve-roots and the spinal centres remained unaltered. And the question is raised, "How frequently in reality does such neuritis occur?" In the examples recorded there had been nothing from a clinical standpoint to suggest its existence, and

they were selected quite by chance. Does it occur both in fatal cases and in those mild or more severe cases which end in recovery? We are led to think the latter possibly true, owing to the frequency with which more or less marked evidences of sensory, motor, or tropic disturbances are met with as sequences of typhoid fever.

Is this neuritis set up by the elevation of temperature? or by the general derangement of nutrition? Or may the typhoid poison act directly upon the nervous fibres, irritate these, and ruin their structural integrity—determine, in fact, a parenchymatous neuritis? This neuritis, it is stated, attacks not only the superficial branches which innervate the skin, but also the larger and deeper trunks. May it not, therefore, be that the disturbances in them are to blame for many of the symptoms generally observed in typhoid: fever, cutaneous hyperæsthesia, muscular hyperæsthesia, wandering or localized pains in the limb, etc., symptoms which are often attributed, perhaps rather gratuitously, to irritation of the meninges or of the spinal cord? The truth would seem to be that when a neuritis of this kind is mild in character and affects only a few of the fibres of any particular nerve, no appreciable symptoms are produced thereby, or, at any rate, such slight phenomena as it may produce are lost in the complex symptomatology of the pyrexia; and that, for some obscure reason, these nervous lesions sometimes become exaggerated, extend to still other bunches of fibres, and then give rise to the well-marked symptoms due to a diffuse or a localized neuritis: sensory, motor, and tropic disorders, confined to the region supplied by one or several nerves, according to the distribution of the determining lesions

As regards the *etiology* of this affection, some authors have regarded it as due to the anæmia which must necessarily result from a long febrile illness. That such is not the case is proved by the actual condition of many of the patients who have shown no such degree of blood-impoverishment as would be at all sufficient to account for serious disorder of the nervous centres of their branches. The series of cases produced by Nothnagel

were selected from the barracks, and were all young, vigorous, and full-blooded men. The effects of any such anæmia would surely be more general, involving loss of energy in movements, but not a true paralysis. It could not possibly produce the clearly defined paralysis affecting special nerves as we find after typhoid fever. The other hypothesis which has been suggested is that the disorder consists essentially in a degeneration of the affected muscles. That this cannot be, is sufficiently obvious from the extensive sections of the body which may be simultaneously involved, as, *e.g.*, both lower extremities, or these together with an upper extremity; from the constant presence of pain at some period, and often severe; and from the existence of anæsthesia.

Post-typhoid paraplegia generally sets in gradually and disappears gradually, but, in rarer examples, it comes on suddenly and passes off either suddenly, or, at any rate, very quickly. Such a case is that reported by Olivier, which led him to infer the existence of a true, but temporary, congestion of the spinal cord. There is nothing impossible about the hypothesis, and it seems necessary in order to explain such a case, but certainly does not apply to the more common forms of gradual development. Nothnagel suggests that actual spinal hemorrhage is more probably here present, and that meningeal hemorrhage has, in reality, been found in fatal cases of typhoid fever.

The predilection for certain special groups of muscles observed in the paralyses of plumbism and of diphtheria does not exist in the same degree after typhoid fever. In it there is no rule, and, to explain it, we must look for some cause capable of making its influence felt in an infinite variety of situations: the ulnar or the peroneal nerve, a plexus of nerves, both lower extremities, an upper, together with the opposite lower, extremity. At the same time, all degrees of intensity may be observed, from the slightest paresis up to complete abolition of function.

The paralysis generally develops slowly and gradually, and it commonly advances to a considerable degree before being arrested. Arrived at this stage, it may be expected to recede

spontaneously or under the influence of treatment, and the case to end in complete restoration of function. A more unusual course is that in which, as before, a slight, or very moderate degree of weakness is gradually developed, and then suddenly a great change occurs, and a perhaps complete paralysis sets in. Even here, the usual result is gradual return to power. In either cases, there are exceptional instances in which the paralysis will be permanent, even in spite of early and efficient treatment.

The first symptom is generally pain, and this may precede any motor defect by some considerable time. Pretty often, the pain and the commencement of the paralysis are noticed about the same time.

The cutaneous sensibility is nearly always diminished, and these sensory disturbances—*i. e.*, pain and anæsthesia—are amongst the most constant phenomena of this affection. In severe and well marked cases trophic changes are seen, consisting chiefly in a greater or less degree of atrophy. There is diminution of electrical contractility, both to the galvanic and to the interrupted current.

From a consideration of these general features Nothnagel strongly argues that the condition is essentially the same as one of traumatic paralysis when the injury has been done by some gradually compressing cause. We must, in that case, look for some pathological cause which is capable of acting in this way. Certain it is that, in fatal cases of diphtherritic paralysis (which has many affinities with that under consideration), there has been found evidence of thickening of the anterior and posterior roots of the involved nerves, especially in the neighborhood of their point of junction ; and also of diphtheritic infiltration within the nerve-sheaths. It is probable that there would be found, in an early stage, proliferation of the connective tissue, and that the subsequent contraction which always sets in under these circumstances would keep up the compression of the nerve-filaments. The same hypothesis would apply to examples of extensive—or even quite limited—areas of anæsthesia.

Retrospect Department.

QUARTERLY RETROSPECT OF MEDICINE.

By R. L. MacDonnell, M.D.,
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Rickets.

Rickets is not to be regarded as a mere bone affection. It is something far more than this; the disease affects not only bones but muscles and ligaments, mucous membrane and skin, the blood and the nervous system. The implication of muscles is shown by the remarkable enfeeblement of muscular power sometimes so great as to be mistaken for actual paralysis; the affection of ligaments by the yielding spine and relaxed knee and ankle joints; that of the mucous membrane by the tendency to catarrh, to croup, bronchitis, and to diarrhœa; the inclusion of the skin by the profuse sweating; that of the blood by anæmia; and the profound affection of the nervous system by its abnormal reflex excitability, leading to laryngismus, tetany and convulsions.

Whatever the constitutional defect which is at the root of the rachitic defect, it is certainly general, and affects all structures, although the bone fault is the most obtrusive and obvious. The theory that rickets depends on constitutional syphilis, that of M. Parrot, cannot be accepted. Syphilis may be an occasional factor, by is by no means a constant or sole factor. Firstly, because in the majority of cases of rickets the history is absolutely free from any suspicion of syphilis; and the patients bear no marks of the disease, as such well established signs as characteristic eruptions, snuffles, depressed nose, linear scars, pegged teeth, keratitis. Secondly, because a large proportion of children suffering from congenital syphilis are not rickety. Congenital syphilis modifies rickets, but it does not create it. Inherited constitutional taint is a doubtful factor; "I have seen nothing confirmatory of the view that rickets is inherited." Parent and child have been exposed to the same cause. General mal-hygiene, such as want of light, fresh air, cleanliness, warm clothing,

* Dr. W. B. Cheadle—Introductory remarks on the Discussion on Rickets at the annual meeting of the British Medical Association, August, 1888.

sufficient food, is doubtless a potent influence in the development rickets in many cases. Yet these are not the sole cause. Children may be brought up in the utmost squalor, and even be generally short of food, and yet not become rickety; and, conversely, may be brought up under the most perfect hygienic conditions in all these respects and yet become rachitic.

Special defects of diet.—"The evidence as to its connection with the developments of rickets is, in my judgment, conclusive." It is a question of quality rather than of quantity. Mere general deficiency will not produce rickets. One of the first and best established facts with regard to the food-connection is that rickets is almost entirely confined to "hand-fed" children. "The only example which I can call to mind of rickets arising in a child suckled by a healthy mother is one in which the mother became pregnant while suckling." The food factor is the only factor which is constant. What is the defect in the artificial food? The condition of food most commonly met with is a farinaceous diet. The occasional association of scurvy with rickets is not only very suggestive of a food origin, but especially of a connection with a farinaceous diet. The theory that lactic acid results from imperfect digestion and unites with the lime of the bones, removing it as a soluble salt, is inadequate, as it has regard merely to bone changes and explains nothing else; moreover, there are other weighty reasons for the non-acceptance of this explanation. That the evil effect of starchy food lies in some negative property is shown by the fact that rickety children get well when the starchy food is continued if ingredients such as milk or raw meat and cream be added to it.

An analysis of the artificial foods given to hand-fed babies shows in all a grave common defect. Two chief elements are wanting—animal fat and animal proteid; probably also, phosphate of lime. The abundance of fat in milk points to its extreme importance in the food of growing animals. The curative power of cod-liver oil is evidence in the same direction. The artificial farinaceous foods contain a mere trace of fat; instead of one-fourth of the whole solids, as in milk, 1-20, 1-80, 1-200 only. The deficiency of proteid alone is not sufficient to cause

rickets appears from the fact that animals grew rickety even when given proteids in excess; yet, as a matter of clinical observation, rickety children got well much more quickly if animal proteid is supplied freely in addition to fat than on the latter alone. The experience of the Zoölogical Gardens is to the effect that the withholding of animal fats and animal proteids from the diet of young animals rapidly produced rickets in them.

The only constant condition, then, found to be associated with rickets is a food fault which can be traced to the deficiency of certain special ingredients. Fat is found in all cells and is probably essential to all cell life and growth, and fat formed in the body clearly cannot replace it for structural purposes. Phosphate of lime is equally essential to every tissue, and it is found to be deficient in rickets both in bones and in the viscera also. Proteid, again, is essential to the vitality of protoplasm, and, indeed, to the activity of all vital processes. So that a diet deficient in these elements—fat, earthy salts, proteid—would explain not only the bone fault of rickets, but the feebleness of muscle, the nervous instability, the debility of mucous membranes. "I would sum up the pathology of ordinary rickets thus: 1. It is primarily a diet disease, which can be caused at will by rachitic diet just as certainly as scurvy by a scorbutic diet, and which can be cured as certainly by anti-rachitic diet as scurvy by an anti-scorbutic diet. 2. That the chief defect in diet which causes rickets is want of animal fat. 3. With this, probably also, deficiency of the earthy salts in form of phosphates. 4. A deficiency of animal proteid in conjunction with the preceding intensifies the condition. 5. The rickety state is accentuated by evil external hygienic conditions, such as foul air and want of light, although these are not essential to its production. 6. Rickets is modified in character by the concurrent existence of congenital syphilis and of scurvy."

Connection with Syphilis.—It has been already stated that syphilis is not a constant essential or sole factor. Rickets occurs in a large number of cases in which the history is absolutely free from any suspicion of syphilis, and in which the children have none of the well-known marks of the disease, even of the

slightest kind; and, secondly, the number of cases of congenital syphilis which bear the established marks of the disease, but which are not rickety; and thirdly, because the cases in which the syphilitic factor can be traced exhibit special characteristics, such as craniotabes, cranial bosses, and perhaps enlargements of the liver and spleen. Thus, the syphilitic factor concurring with the diet factor modifies the disease, but does not alone create it.

Connection with Scurvy.—Dr. Cheadle was the first in England to recognize the real nature of infantile scurvy, and to trace its source to a scorbutic diet. Dr. Barlow has confirmed these conclusions, and similar cases have been confirmed and identified as scorbutic by Dr. Dickinson. There can be no doubt about the nature of this scorbutic condition of infants. The symptoms correspond to those of the scurvy of adults as exactly as the post-mortem changes. The cause lies in a diet of farinaceous or desiccated or condensed foods destitute of fresh element, just as in sea scurvy. Fresh milk is the great anti-scorbutic food of infants. Potatoes are likewise a great protection in the diet of the poor, and no doubt prevent many children from becoming scorbutic for lack of fresh milk, who become rachitic from that cause.

In all Dr. Cheadle's cases scurvy has been associated with rickets, although in some this has been of the slightest, and on this point Dr. Barlow's experience agrees. Probably the connection is not absolutely essential, but in the nature of things the two conditions are likely to arise together. Both are the results of artificial feeding. "If it is rare for a child at the breast to become rickety, it never becomes scorbutic." The constant existence of bone-tenderness and muscle-tenderness in cases of severe rickets suggests the possibility of many of these being slightly scorbutic also, without the more advanced and recognized signs, such as spongy gums or hemorrhages being developed. "I know from practical experience that many cases of slight scurvy pass unnoticed, the rickety condition alone being recognised, even when spongy gums or periosteal swellings indicate the presence of the scorbutic state.

Nature of the Enlargement of the Liver and Spleen.—Although this condition is laid down in Sir William Jenner's standard description as a regular feature of rickets, and Dr. Dickinson also considers it an essential part of the disease, Dr. Cheadle has been unable to find it in the majority of cases. Dr. Fagge, Dr. Goodhart and Mr. Clement Lucas have also failed to discover much enlargement of viscera in a great proportion of cases, while Dr. Gee regards it as a result of previous cachexia apart from rickets. The cases in which the spleen has become enlarged can be distinguished (Goodhart) by their special pallor. In a case under Dr. Cheadle's observation, where both liver and spleen are enlarged, there are marks of congenital syphilis. The change in the organs is a diffuse, often hyaline, fibrosis, in no way distinguished from the fibrous enlargement of ague or syphilis.

Valvular Disease of the Heart.

Dr. DaCosta's* paper deals with matters connected purely with the treatment of valvular disease of the heart, and the writer advances these propositions as indications for the management of such cases: 1. The state of the heart muscle and of the cavities. 2. The rhythm of the heart's action. 3. The conditions of arteries and veins and of the capillary system. 4. The probable length of existence of the malady and its likely cause. 5. The general health. 6. The secondary results of the cardiac affection. Of these the first is most important. When we know that compensation has followed injury, that heart muscle and cavity are for that case in a healthy condition, we should endeavor to keep them so simply by regulating the patient's life and habits. "No matter by what name the valvular disease is labelled, there ought to be no interference with it by drugs, certainly not by remedies which act upon the heart." But the same patient may show later on excessive cardiac growth and evidences of failing compensation. "The stretching, faltering heart calls for support and is

*The treatment of valvular disease of the heart, read before the Association of American Physicians, Sept. 19th, 1888.

rallied, made regular, and kept for a long time performing its functions admirably by the persistent employment of moderate doses of digitalis." Yet this is the same patient, and the point the writer wishes to make is that the same valvular disease will, at different times, according to the varying state of heart muscles and of the cavity, require very varying treatment. Dr. DaCosta has met with cases in which the active state of the circulation, the marked hypertrophy, the cardiac uneasiness were always greatly relieved by aconite, and so much aggravated by digitalis that the patient had the greatest dread of the drug, yet such cases in time, when the heart began to weaken, have owed, for years, their life to the steady use of digitalis. The quantity required is rarely more than ten drops of the tincture twice daily, kept up until the effect on the heart and pulse become perceptible—which may be in a week or in several—and then suspended, to be resumed according to circumstances· "Nay, I have found a single dose of ten drops, repeated once in twenty-four hours, preferably at bedtime, show the same happy results." Some patients do better with five drop doses every fourth or sixth hour. But the rather larger dose, at longer intervals, is usually the less disturbing plan. Should the digestive organs become deranged, I use digitalis by suppositories; from two to four minims of the fluid extract incorporated in cocoa butter are efficient. Digitalis is required in much larger doses in cases in which there is almost from the first dilation and all the excessive feebleness of circulation this brings with it; or in which, late in the history of the valve affection, the dilation has outstripped the hypertrophy. Digitalis, in such cases, may be alternated with strychnia and supplemented by alcohol. In still larger doses should it be given where compensatory hypertrophy is gradually lessening in proportion to the valvular defect; where the venous system is becoming gorged, the breathing much oppressed, the internal organs congested; where the feet are beginning to swell, the pulse rapid and compressible, and the heart often fitfully excited; where the symptoms become suddenly aggravated, and a sense of weight and distress in

the cardiac region suggests that the organ does not thoroughly empty itself. Fifteen minims of the tincture every second or third hour should be given, aided by ammonia and brandy. The patient must be kept at rest. This condition may supervene in any case of valvular disease, most frequently in mental disease, and when it occurs in aortic regurgitaion we need not be deterred on theoretical grounds from withholding the treatment indicated.

If there be not a healthy heart muscle, but if granular, fatty, waxy or fibroid change be present, how must the treatment be changed ? It cannot be materially modified except in the rather steadier use of stimulus ; yet we will not obtain the same result from digitalis or kindred agents, and arsenic or strychnia is always worthy of a trial.

Another class of cases call for aconite. They present excessive muscular growth and cavities that have but moderately increased ; a state more often met with in aortic affections, particularly regurgitation, but also in mitral regurgitation, with or without co-existing aortic disease. The impulse is extended, forcible, and forcible out of proportion to the cardiac percussion dullness: there is often throbbing of the vessels of the neck, and a feeling of construction in the chest. Aconite relieves blood pressure. Dr. DaCosta gives two drops of the tincture every fourth or sixth hour for the first few days of the treatment, and then only twice a day ; or give one drop every third hour until the effect on the force of impulse and pulse is produced, and keeps up this effect with a drop dose, two or three times a day, for several weeks, intermitting the treatment and resuming it from time to time. Veratrum viride has similar applicability, but it is more apt to nauseate. The happiest results have followed from a combination of one-drop doses of aconite tincture with three of tincture of veratrum viride and seven of tincture of ginger. It is an admirable sedative and does not sicken.

2. The rhythm of the heart. There are cases especially of mitral narrowing in which the extreme irregularity presents a striking feature. They are mostly cases with imper-

fect or weakening compensation, and therefore to be benefitted by digitalis and remedies of that class. As an adjunct to this treatment belladonna may be advantageously employed and pushed to its constitutional effect.

3. The condition of arteries, veins and the capillary system. We must remember that digitalis contracts the arteries and arterioles, and the indications are often to get with increased cardiac power a free flow in the vessels without resistence in them. No remedy does this and a certain remedy of the kind is greatly needed. The evidence is in favor of strophanthus contracting the vessels to a much less degree than digitalis. Nitro-glycerine and the nitrites produce rapid and great dilatation of the vessels, but have very little effect upon the muscular power of the heart. Belladonna and atropia, in decided doses, have somewhat the same action as nitro-glycerine, less on the vessels, rather more on the heart.

4. The probable length of existence of the malady and its likely cause. When the cause is rheumatic there is no special treatment. We possess no remedies to influence the results of the rheumatic endocarditis, when the acute stage is fairly over.

5. The general health. Iron is not, as a rule, a good remedy; it constipates, produces headache, a full feeling about the heart and is badly digested. It ought to be given in cases clearly anæmic, or after recovery from an acute malady.

6. The secondary results of the cardiac affection. Palpitation, in one set of cases, calls for ammonia and brandy. Here the pulse, though rapid, does not correspond in strength, the heart is really weak and laboring. In other cases, where the heart's action is at one time fast at another slow and much influenced by fatigue, where there is functional disease superadded to the organic. Great attention to the general health, with rest, will get rid of the added marked functional disturbance; and occasional doses of bromide added to digitalis, if this be not otherwise contra-indicated. A course of cannabis

indica or of arsenic will show most results. Where there is cardiac uneasiness and pain iodides usually do good, as well as the wearing of a plaster. But nitro-glcerine is the best remedy. Two cases are cited in detail illustrating in a marked degree the benefits of treatment.

The condition of the urine requires constant attention. Scanty urine full of lithates, of higher specific gravity than normal, will go hand in hand with cardiac pains, with headache and with dyspnœa. Diuretics are most valuable in relieving pulmonary distress and other symptoms, and none better than caffein, two-fifth grain doses of the citrate every third hour. For the dyspeptic symptoms purgatives are the proper remedy. "Purgatives are not given as often as they ought to be in valvular disease of the heart."

None of the new remedies are so valuable as digitalis. "I hold caffeine, strophanthus and adonidine to be the best substitutes." Adonidine (1-10 to 1-5 gr. doses three times a day) yields better results in functional than in valvular cases. So does strophanthus, which Dr. DaCosta has often seen strikingly influence irregularity and dyspnœa. As a diuretic it is inferior both to digitalis aud to caffeine. Chloride of barium is both a general and a cardiac tonic, a remedy that increases the tone in the bloodvessels, a fairly good diuretic, and one that can be taken for a long time without disordering the stomach. Tbe dose is 1-10 grain in pill, three or four times daily; a rather larger dose is, however, admissable. In very decided amounts it is apt to produce diarrhœa. Having many incompatibles it had best not be given in combinations.

Infectious Jaundice.

Under this title Vassilieff contributes to a Russian journal (quoted in the *Lancet*, Dec. 1st, 1888) the results of his observations of eleven cases of this morbid condition made in 1883 in the Alexandrovski Military Hospital. The main characteristics are as follows: Usually sporadic; initial fever followed by enlargement of the liver and spleen, jaundice and renal complications; termination usually favorable. Some cases began with

a chill, followed by nausea and vomiting, after which there were general debility, pains in joints and muscles, especially those of the lower extremity, great thirst, disturbed sleep and delirium, high temperature, pulse soft and rapid, tongue moist and slightly coated, skin hot and dry. At the beginning the liver and spleen are enlarged and tender. Albumen and casts were found in the urine, and, when there was jaundice, bile pigment. The lungs sometimes were affected with bronchitis, and in two cases pleurisy occurred. At the outset there was constipation, but later on the bowels were somewhat relaxed. Frequent epistaxis. Herpes was occasionally present. No micro-organisms could be detected in the blood. At the outset there was great prostration, but that soon passed away. Temperature began to fall about the eighth day. Convalescence was slow. In a fatal case observed by Vassilieff, blood was found extravasated in the serous and mucous membranes and sloughing of the mucous membrane of the pharynx.

Fiedler* reports thirteen cases. He considers this disease, first described by Weil in 1886 and known in Germany as Weil's disease, as acute and infectious, and distinct from any recognized disease. Its clinical features are identical with those above enumerated. The course of the disease is usually eight to ten days, and defervescence is gradual. Herpes and erythema have been observed. The prognosis is good. Men are more frequently attacked than women. Nine out of twelve of his patients were butchers.

Schaper† reports a case occurring in a soldier aged 22, in which, after the usual symptoms had occurred, a relapse set in on the eighteenth day, with elevation of temperature (103.4°F.) reappearance of the jaundice, and a rigor. These symptoms subsided in a few days and recovery ensued.

Hirchner‡ observed an epidemic of such cases at Breslau amongst the soldiers in garrison there. Between the 30th July and the 18th August eight men were attacked. No cases were

* Revue des Sciences Médicales, 15th October, 1888, p. 527.

† Deutche Militärärztl. Zeitchr., No. 5, p. 302, 1888.

‡ Ibidem, p. 193.

fatal. No general cause could be discovered. In all of these the onset was sudden, with an initial chill, headache and prostration. The temperature reached its acme (103½°F.) in 24 hours, and began to decline in one or two days, again rising, but never so high as in the primary fever. Parotiditis was present in one case. The jaundice began to appear when the fever was subsiding, and was intense, the urine being tinged and the fæces devoid of coloring matter. Albuminuria was present in but one case. Cerebral manifestations were marked. The author regards the disease as infectious, and wishes it to be called "indigenous yellow fever."

Hueber* reports four cases of his own and three collected by Dr. Lebsanft. The subjects of the disease are mainly recruits of vigorous constitution, and the symptoms occur in the hot season, resembling those already described. Hueber points out a special diagnostic sign, which he regards as characteristic, acute inflammation of the pharyngeal mucous membrane, as well as that of the bronchi, intestinal and urinary tract, which shows itself by epistaxis, bloody expectoration, melæna, hæmatemesis, and hæmaturia. The post-mortem appearances recorded by Vassilieff support this observation. Weil's disease cannot be included in the category of any recognized bilious disease, nor can the opinion of Weil be entertained that it is an abdominal typhus complicated with jaundice and nephritis. It is a general infectious disease, produced probably by the action of a special microbe.

Purulent Pericarditis.

At a meeting of the Clinical Society of London, Dr. Dickinson related the history of a case of purulent pericarditis successfully treated by aspiration and drainage.† A boy, aged 10, suffered at first from symptoms regarded as pyæmic. A large gluteal abscess was followed by signs of pleural effusion and œdema of the face and chest. Aspiration of the pleura, though the means of withdrawing a considerable quantity of serum, relieved but slightly and temporarily the dyspnœa, blueness, and

* Ibidem, No. 4, p. 165, 1888.
† British Medical Journal, Dec. 1st, 1888.

œdema. The pericardium was then aspirated by Mr. Rouse and an ounce of creamy pus withdrawn. Eight days later twelve ounces of a similar fluid were withdrawn, and at the end of a week nineteen ounces. The place selected for the puncture was on the right side, close to the edge of the sternum, in the fifth interspace. The heart, before each of these operations, had been drawn to the left by a preceding evacuation of the pleura. A week later it became evident that the sac of the pericardium was again full. An incision was therefore made where the punctures had been and a tube inserted. Recovery eventually occurred after some temporary drawbacks and three subsequent aspirations of the pleura. In three months there was no remnant of the pericardial puncture except a small cicatrix, which moved with each beat of the heart. A remarkable fact in the history of the case—one, however, not unprecedented in similar circumstances—was the nearly total absence of precordial friction, which was recognized but on one occasion.

Dr. Dickinson's is now the third published case that has recovered, the two others being those of Rosenstein and S. West.

Pleurisy.

Hagen-dorn* is of opinion that sudden death occurring in the course of a pleurisy cannot be attributed to compression of the inferior vena cava. Several clinical observations have convinced him that the blood is stagnant in the healthy lung during the short and feeble expirations, whilst it flows into the lung and right heart in strong inspirations. Cyanosis and feebleness of pulse is the result. The left heart suffers from these respiratory changes; expiration does not favor its function, and expiration rendered more energetic than usual can go so far as to stop the contraction of the heart. After puncture, the diaphragm contracts more energetically and aids in increasing the negative pressure of inspiration in such a way that the compressed lung and the heart do not resume their normal position. Sudden death in pleurisy may be attributed in such cases to a stoppage of the heart. caused by the increase of the negative pressure brought about in the thorax by inspiration.

* Revue des Sciences Médicales, 15 Octobre, 1888.

Brain Symptoms in Purulent Pleurisy.—Cérenville, in a Swiss journal (quoted by the *Revue des Sciences Médicales*, 15 Oct., 1888), contributes an article on "Des Manifestations Encéphaliques de la Pleuré sie Purulente," in which two principal forms of such symptoms are described, occurring separately, consecutively or simultaneously: (1) The epileptoid form. (2) The hemiplegic form. The author cites six cases of his own and fifteen which he has collected from the records of others. In purulent pleurisy dilatation of the pupils is the rule. There is no constant relation between the side affected and the limbs, which undergo convulsive movements. The epileptic attacks can give rise to capillary retinal hemorrhages; in other cases, amblyopia is a result, or amaurosis or subjective phenomena pointing to retinal exaltation. The constant cause of these manifestations is the contact of the pleura with the fluid of an injection or with a foreign body. They occur at a late stage of the disease, exceptionally before the fourth week after operation. The immediate cause is a reflex stimulation starting from the pleura and transmitting itself to the vasomotor centres. The author is disposed to regard as the starting points of this influence the minute branches of nerves developed in the fleshy vegetations of the pleural surface. Of his 21 cases, six ended fatally, and of the latter, four were due to cardiac lesions. Even if there are no premonitory signs of encephalic manifestations, yet there are certain clinical phenomena not unworthy of notice. 1. A persistent tendency to inequality of the pupils. 2. A bright blush on the cheek of the side on which the pleurisy exists. 3. The presence of blood in the liquid injected. 4. Pain felt the moment the tube or sound touches the pleural surface.

QUARTERLY RETROSPECT OF OBSTETRICS.

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Puerperal Auto-infection.—Dœderlein of Leipsic read an interesting paper before the German Gynæcological Association in May last (*Der Frauenarzt*) showing how cases of so-called *auto-infection* sometimes occur. In April, 1887, the patient, aged 37, while pregnant, was attacked with erysipelas of the skin, starting from a wound on the finger. She aborted shortly afterwards and was attacked subsequently with pneumonia and pleurisy. In December following she applied at the Leipsic policlinic, saying that she had been bleeding for two weeks, and an examination showed that she was then about six months pregnant. The loss of blood became so great that the induction of premature labor was decided upon; the operation was performed with the usual antiseptic precautions. Before operating there was no fever, but immediately afterwards fever set in and continued till the fifteenth day, when she died. There were no evidences of endometritis or perimetritis, but the erysipelas-streptococcus was found in the lochia. The joints were swollen and painful till two days before death. The autopsy showed absence of septic appearances in the uterus, ovaries and peritoneum; but there was recent leptomeningitis, and erysipelas-streptococci were found there and in the joints. Dœderlein considers that the fatal attack of internal erysipelas was caused by germs which had remained latent since the previous abortion and had been rendered active by the premature labor. It is well known that micro-organisms of different kinds are commonly found in the vagina (even *staphylococci*, according to Winter). It is quite possible, therefore, for a patient to be infected by the germs she harbors in her vagina. It is incorrect and misleading, however, to cite such cases as examples of auto-infection. By *auto-infection* we mean that the infecting poison is not introduced from without, but is developed *de novo* in the patient's own body Germs which have found their way into the vagina and develop there are not the *de novo* products of the patient's own body

any more than they would be if growing in the mouth, nose or respiratory passages. It must be remembered that the vagina is merely one of the external organs of generation, and that unless cleanliness is strictly observed it is apt to receive all sorts of noxious matters from without, supplying the heat and moisture requisite for germ growth and multiplication. The use of the term *auto-infection* in such cases as the one reported is a play upon words, as dangerous as it is disingenuous, for it is liable to confuse our ideas and divert our attention from the essential point that when septic infection occurs, the infecting germ has been introduced from without, not generated within. Dœderlein's case goes far to strengthen the position of those who insist upon thorough disinfection of the vagina early in the second stage of labor.

Treatment of Sore Nipples.—Dr. Auvard discusses this question at some length (*Gazette Hebdomodaire*) and describes the treatment he employs in his own service at the Maternité de la Charité. As a prophylactic he recommends, during the last month of gestation, daily traction and manipulation of the nipple, followed by friction of the whole breast with alcohol. During the last fortnight he directs the nipple to be drawn out daily by means of a glass nipple-shield fitted with two rubber tubes. The shorter tube is immersed in a small vessel of alcohol; the longer one is placed in the mother's mouth. Suction upon the longer tube draws a little alcohol into the shield; if the small tube is then compressed by the fingers while suction is continued, the nipple will be drawn out and distended while at the same time it is bathed with the alcohol in the shield. The nipple is thus toughened by contact with alcohol while it is being drawn out. He insists upon special care being taken to avoid excoriation and ulceration during the early days of nursing. Sores are then always caused by the child biting and wounding a sensitive, depressed, or ill-formed nipple. The early use of a shield is the best way of preventing such traumatisms. The objection to the ordinary form of shield is that nursing is thereby made more difficult and fatiguing: the child having to pull harder and longer than without the shield, becomes tired, and refuses to nurse or

does not get a sufficient quantity of nourishment. Auvard gets over this difficulty by adjusting a rubber tube to the shield so that the mother may do some of the suction and thus make nursing easier for the child. He uses the nipple-shield for the first fifteen days of nursing, and then gradually discontinues it as the nipple grows less sensitive and tender. If sores or fissures appear they must be treated at once (1) to alleviate the pain of nursing, (2) to prevent access of entrance of germs, (3) to secure prompt healing. Pain is relieved by applying a cocaine solution to the fissure or sore and permitting nursing only through a shield. The bitter taste of the cocaine is not objectionable when the shield is used. Germs are excluded by keeping the breast covered with lint moistened with some antiseptic liquid, as alcohol or a four per cent. solution of boracic acid. Moist dressings seem to succeed better than dry. Iodoform is not usually of much service ; alcohol is better, for it hardens while it disinfects. To secure rapid healing the nipple should be kept as much as possible at rest. Complete rest for thirty-six hours will heal most ulcerations. The shield should be used till the nipple becomes harder and less sensitive.

Treatment of Parenchymatous and Phlegmonous Mastitis.—Some four years ago Dr. Loukchévitch published in the *Wratsch* the good results he obtained in the treatment of acute blenorrhagic epididymitis with clay dressings. M. Maizel has recently (*Gazette de Gynécologie*) applied the same idea successfully to the treatment of phlegmonous and parenchymatous mastitis. He finds that these dressings relieve pain rapidly, diminish the heat of the parts, and prevent suppuration if applied early. If an abscess already exists, it must be opened and cleansed ; the clay dressings are then applied and it is found that cicatrization is favored, and other indurations which have not suppurated speedily resolve. He finds the clay dressing more effectual and less painful than the starch bandage (Kiwisch) or collodion applications (Latour, Sprengel). It may also be used with benefit to check the secretion of milk when lactation is for any reason to be stopped. Maizel's method is as follows : Take a sufficient quantity of white sculptor's clay, work it up sufficiently and then

mould it on a piece of calico into a shape large enough to envelop the breast, leaving a hole in the centre for the nipple. Wash the breast carefully, cover it with soft gauze or lint, apply the moulded clay and fix the dressing with a bandage. The dressing is changed twice daily. The action of the clay is two-fold: (1) It absorbs heat and acts as a refrigerant to a certain extent (like an ice-bag); (2) it exercises a compression which is gentle, uniform and permanent, and which favors the resolution of inflammatory products.

Paralysis of the Sciatic from Compression during Labor.—Dr. Vinay (*Archives de Tocologie*) relates the following case, remarkable for its rarity: The patient, aged 32, II para, began labor on the morning of the 5th April, 1887; the membranes ruptured on the 7th, but some hours elapsed before the head came down and rotated with the occiput to the front and left. Labor was finally terminated with forceps without much difficulty. The following day the patient could not stir her right foot. On April 15th the foot was drawn down, and she could neither flex it nor turn it to either side. When she flexed her right thigh upon the abdomen it rotated outwards. The *tensor vaginæ femoris* did not seem to act. Sensibility was not diminished. A course of massage and faradisation caused the paralysis to disappear by the 12th June. Paralyses from pressure are unilateral and limited to the distribution of the affected nerve, thus differing from those produced by albuminuria and other constitutional causes.

Fracture of the Symphysis Pubis during a Forceps Operation.—M. Faux describes an unusual case (*Bulletin de la Société Obstetricale*) where the symphysis was fractured during extraction with the Tarnier forceps. The patient was a primipara, 25 years of age, with a pelvis somewhat narrowed at the brim, in the conjugate diameter. Labor lasted forty-eight hours, forceps were applied and the head slowly and carefully brought down. Crepitus was felt as the head came down upon the perineum, and again as it emerged from the vulva. The child was dead, its head was of normal size, and bore no marks of violence. On examination, the symphysis was found to be frac-

tured and the subpubic tissues to be bruised, swollen and œdematous. The patient recovered perfectly.

Imperforate Hymen and Pregnancy.—Zinsstag of Bâle publishes a case (*Gazette de Gynécologie*) of imperforate hymen, dilatation of the urethra, and pregnancy. When the patient, aged 29, was admitted into the Bâle obstetrical clinic the hymen was found to be thick and imperforate, the urethra so much dilated that the finger could be passed into the bladder, through posterior wall of which the fœtal head could be felt presenting at the brim of the pelvis. The hymen was incised, the vagina was normal, and labor terminated without special difficulty. The patient menstruated regularly from the age of sixteen. After marriage, coitus took place per urethram. There was no sign of fistulous communication between the urethra and vagina, so that it was impossible to decide how the seminal fluid found its way to the uterus—whether through a tiny opening in the hymen or through a small vesico-vaginal or urethro-vaginal fistula.

Physiology of the Third Stage of Labor.—Dr. Helme recently read a paper on this subject before the Edinburgh Obstetrical Society (*Edinburgh Medical Journal*) which is of considerable value from a clinical point of view. The mechanism of the separation and expulsion of the placenta has long been a subject of dispute, and the two rival theories are diametrically opposed to one another. According to one, the placenta is separated by uterine *contraction;* according to the other, by uterine *relaxation.* According to one, the placenta is detached and expelled *by* and *during* a pain; according to the other, it is detached *after* a pain and expelled by and during a subsequent one. Dr. Helme's patient, aged 35, a VIII para, was delivered of twins. The first child breathed and cried loudly before the cord was tied, thus aspirating the fœtal portion of the placenta and making it "practically a bloodless structure," as Dr. Berry Hart calls it. The second child, born three hours and a half later, did not breathe before the cord was tied, so that its placenta was not aspirated, but remained gorged with blood. The placenta of the first child was situated high up near the fundus; that of the second was lower down. After the birth of the second child

the uterus relaxed and became flabby and soft; the fundus reached midway between the umbilicus and the xiphoid cartilage, and some hemorrhage took place. The hand was passed up into the uterine cavity and both placentæ were felt attached to the uterine wall. By external manipulation a strong uterine contraction was excited, during which the lower-lying placenta was detached and expelled. The uterus again relaxed and free hemorrhage took place. The hand was again passed into the uterine cavity and the remaining placenta was found to be partially detached. To prevent further loss of blood it was quickly peeled off and extracted.

In this case there was a large flabby uterus containing two placentæ, one gorged with blood situated high up near the fundus, the other small and bloodless situated lower down, neither being morbidly adherent to the uterine wall. Very considerable relaxation occurred without detaching either placenta; a strong pain suddenly came, separated and expelled the lower lying placenta, and partially detached the other. Relaxation again occurred without completing the separation, and finally to check hemorrhage the placentæ had to be removed artificially. Several points seem to be clear in this case:

(1) Uterine *relaxation* did not detach either placenta.

(2) Uterine *contraction* detached one placenta completely and the other partially.

(3) The large, bulky, engorged placenta was more easily detached than the small bloodless one.

(4) The lower-lying placenta was detached first.

Dr. Berry Hart's theory that the placenta is separated during uterine relaxation is not borne out by this case. It seems clear, too, that the practice of leaving the placental end of the cord untied in order that the placenta may be reduced in size by bleeding, retards rather than favors its separation. Uterine action is more likely to be effective if the placental mass is relatively large; when the contractile power of the uterus is feeble, sufficient pressure is not brought to bear upon a small bloodless placenta to separate it from its attachments.

The Bacteriology of the Lochia.—D. Von Ott of St. Peters-

burg (*Archiv f. Gyn.*) concludes a paper on this subject with the following observations :—

(1) In the lochia of healthy puerperal women, micro-organisms are not found either in the uterine cavity or in the upper part of the vagina.

(2) Normal lochial fluid is quite harmless.

(3) If micro-organisms appear in the lochia and cause puerperal troubles, they must have been introduced from without—there has been infection.

He explains the fact that a vagina which contains innumerable micro-organisms before labor becomes free from them after labor, as follows: the fœtus during birth dilates the whole parturient canal to such an extent that all folds and irregularities disappear and the vagina is in a manner wiped clean by the fœtus as it passes through; the gush of liquor amnii which immediately follows the birth of the child helps and supplements this cleansing process.

E. F. Czerniewski recently reported to the St. Petersburg Obstetrical Society the results of his investigations on the relations between micro-organisms and puerperal diseases (*Centralblatt f. Gyn.*) His conclusions are:

(1) In the lochia of healthy puerperal women micro-organisms are very rarely found.

(2) The lochia of healthy puerperal women has neither pyogenic nor phlogogenic properties.

(3) In the great majority of cases, streptococci can be found in the discharges from the uterine cavity of women suffering from puerperal troubles, which micro-organisms are undoubtedly the cause of the disease.

(4) In fatal cases of puerperal disease (lymphatic form of septicæmia) streptococci develop in cultures from the lochia as well as after death from the general fluids and organs.

(5) Fatal cases of puerperal septicæmia are caused by the entrance of streptococci through the general passages.

(6) The streptococci of mild and severe cases are identical.

(7) The streptococci found in puerperal cases are able to produce suppuration or erysipelatous inflammation of the skin.

(8) Disease of the organism caused by streptococci manifests itself in degeneration of parenchymatous organs and hyperæmia of serous membranes with more or less exudation.

Leukæmia and Pregnancy.—In September 1887, I read a paper on this subject before the Washington International Congress and reported the first authentic case of pregnancy occurring in a woman already leukæmic. Shortly afterwards, Dr. J. L. Greene of Morgantown, Indiana, published two cases, only one of which, however, can be accepted as undoubtedly leukæmic. Quite recently Dr. Sænger of Leipsic has published a third case (*Archiv. f. Gyn.*, Bd. xxxiii, Hft. 2) and has at the same time written up the literature of the subject thoroughly and compared the three cases together. His article is the most complete yet published, and is well worthy careful study by those interested in the subject. His patient when first seen was between two and three months pregnant; there was enlargement of the spleen and increase in the number of white corpuscles, the W:R being 1:15. There was no hereditary influence made out, no history of malaria or menstrual disorders, and leukæmia had unquestionably preceded pregnancy. As gestation advanced, the spleen rapidly enlarged, till at last she suffered so much from sleeplessness and abdominal distension that premature labor was artificially induced. Labor terminated without hemorrhage and the patient made a good recovery, her leukæmia not seeming to be materially affected by the pregnancy. The child was living and well developed, showed no leukæmic symptoms, and at last accounts was thriving well. The examination of the maternal, fœtal and placental blood gave results similar to those obtained in my case. From an examination of the three cases, Sænger concludes that leukæmia is not caused by menstrual or ovarian troubles, does not prevent conception, does not predispose to hemorrhage before, during or after labor, and is not much influenced in its ultimate course by the intercurrence of gestation. Pregnancy affects leukæmia and pernicious anæmia quite differently; in the former there is improvement in both subjective and objective symptoms after the conclusion of labor, in the latter there is rapid and steady increase in their gravity. Sænger

also reports a case of leukæmia in the fœtus before birth, and reviews the work of Jakesch and Klebs upon general dropsy of the placenta and the new-born child. On comparing these two classes of cases, it is quite evident that

(1) A leukæmic mother may bear a healthy child.

(2) A healthy mother may bear a leukæmic child.

This affords conclusive proof that the maternal and fœtal circulations are distinct, and that leucocytes do not pass from one to the other. Sænger pleads for a careful examination of the placenta in subsequent cases which may be observed, for leukæmia offers the one possible chance of comparing together in the same placenta two different kinds of blood, that of the leukæmic mother and the healthy child.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

CASES FROM THE GYNÆCOLOGICAL CLINIC OF DR. WM. GARDNER.

(Reported by J. M. Potts, M.D.)

CASE I.—*Vesico-Vaginal Fistula; Operation; Recovery.*

E. S., aged 25, was admitted to hospital August 29th, 1888, complaining of inability to hold her urine. Menstruation had been regular till two and a half years ago. Since that time it had been scanty, irregular and accompanied by pain. For the last six months menstruation had been absent; slight leucorrhœa. Two pregnancies to full term the last two and a half years. This last labor lasted forty-eight hours, and was then terminated by forceps. Since that time she had been unable to retain her urine. Examination showed a large vesico-vaginal fistula and pathological stenosis of the cervix.

On Sept. 19th, patient was etherized and Dr. Gardner proceeded to operate. The anterior vaginal wall was destroyed to such an extent that the posterior cervical wall had to be used as a flap, thus leaving the os inside the bladder. Fourteen wire sutures were put in, a soft rubber catheter left in the urethra, and the vagina packed with iodoform gauze. Convalescence was good. A mild cystitis developed, which was treated by washing out bladder twice daily with a weak carbolic solution

and the administration internally of benzoic acid gr. x and biborate of soda gr. xv in two ounces of water after meals. On the 28th the sutures were removed and union found to be complete.

Oct. 1*st.*—The catheter was removed and the bladder washed out only once daily. At first micturition was rather frequent, but by the 5th she could retain urine for four or five hours.

Oct. 9*th.*—The carbolic injections and the benzoic acid were discontinued.

Oct. 11*th.*—Ordered quinine sulph. gr. iss and acid phos. dil. ♏x t.i.d.

Oct. 17*th.*—Began to wash out bladder once daily with solution argent. nitratis gr. i ad ℥i.

Oct. 22*nd.*—Discharged cured.

CASE II.—*Pneumonia (Puerperal) running its course with subnormal temperature, absence of cough, pain and expectoration.*

Mrs. B., aged 23, was brought to the hospital in the ambulance from the steamship Pomeranian on November 17th, 1888. The passage out was very rough, and patient was sea-sick from the time she left England till the thirteenth day out (Nov. 10th), when she was confined prematurely (six months). Labor, though of short duration (six hours), was severe; there was considerable post-partum hemorrhage and retention of part of the placenta. The ship surgeon tried to remove it, but failed; he again tried on the 13th, with no better result.

Past history—Patient has had no severe illness, but has always been delicate.

Family history—Father died of phthisis; otherwise good.

Condition on admission—Patient was a small, delicate-looking woman; complained of no pain, but felt felt very weak; lochia scanty and slightly offensive; involution going on well; eyes sunken; tongue coated; surface of body cold; temperature 96.5°; pulse 120, small and very weak; body covered with an erythematous eruption; vomited on the slightest exertion; bowels moving rather freely.

Nov. 18*th.*—Dr. Gardner removed the retained pieces of pla-

centa with finger and curette and washed out the uterus; quite a large amount of placenta was taken away.

Nov. 20th.—Very low; temperature still subnormal; pulse very weak and fast; vomiting and diarrhœa. Ordered brandy (ʒiv) during the day and cocaine hydrochloratis gr. 1-6 every three hours.

Nov. 21st.—Diarrhœa worse; vomiting of a coffee-ground substance nearly incessant. The brandy was stopped and champagne ordered. Lochia stopped to-day.

Nov. 22nd.—Condition a little improved; there had been no vomiting since the champagne was ordered, although the diarrhœa is still bad; temperature subnormal and pulse 130, weak and small. Ordered a small amount of peptonized milk.

Nov. 23rd.—Diarrhœa worse; the vomiting had not returned; temperature 96½; patient very weak.

Nov. 24th.—Condition much the same; stopped the champagne and ordered bismuth subnit. gr. xxx and pulv. opii gr. 1-6 every two hours till diarrhœa was checked.

Nov. 25th.—Diarrhœa, although not stopped, was not so severe; discontinued the bismuth and opium.

Nov. 26th.—The diarrhœa was worse; a little vomiting; temperature subnormal, but pulse better. Ordered sparkling Burgundy (Chambertin) ʒi every two hours.

Nov. 27th.—Condition was unchanged,

Nov. 28th.—Erysipelas started in the nose; condition otherwise much the same. Removed to infectious wards; while there, although the erysipelas did not extend, she gradually got worse, and died on the evening of the 30th.

Dr. Lafleur made a post-mortem examination and reports as follows: "Acute lobar pneumonia of right lung, lower lobe. Fatty degeneration of heart-muscle and kidneys. Fatty infiltration of liver. Subinvolution of uterus and a sloughing patch on the placental site."

Although the pneumonia had evidently developed after admission to hospital, the temperature was always subnormal; there was no pain, cough, expectoration, or any symptom that would lead to suspicion of any lung trouble.

Reviews and Notices of Books.

Anæsthetics—their Uses and Administration. By DUDLEY WILMOT BUXTON, M.D., B.S., M.R.C.P., Administrator of Anæsthetics in University College Hospital, the Hospital for Women, Soho Square, and the Dental Hospital of London. London: H. K. Lewis, 136 Gower Street.

After a brief and interesting account of the history of anæsthesia from early times, the author describes the preparation of a patient for an anæsthetic. He enters very fully into the circumstances and conditions which should guide us in determining what anæsthetic should be employed. If the advice in the following sentence was universally followed, we feel confident that the large death list directly due to anæsthesia would be greatly diminished: "Persons of early adult and adult life should have ether given them, provided always they are free from pulmonary affections and renal disease." This advice is especially appropriate for the author's own countrymen. The A.C.E. mixture is recommended for asthmatics and those suffering from chronic cough and emphysema. This mixture is not, however, as safe as is commonly believed. It is not at all infrequent to have alarming symptoms attend its administration.

No satisfactory explanation has as yet been advanced to account for the suppression of urine that occurs in ether anæsthesia when the kidneys are much damaged. Arterial changes contraindicate the employment of ether on account of the danger of rupture from the increased blood-pressure. Hence in old people with diseased vessels chloroform is preferable to ether. The choice of an anæsthetic in people with organic disease of the heart is frequently a matter of difficulty. It is to be decided mainly by the state of the heart muscle. If compensation is ruptured, especially in mitral disease, both ether and chloroform are dangerous—the former from throwing additional work on the heart through water logging the lungs; the latter owing to its directly depressant action on the heart. In such a dilemma the A.C.E. mixture should be administered.

Where it is necessary to use the cautery, ether should not be

employed on account of the inflammability of its vapor. This precaution is especially incumbent in operations about the jaws, when it is not possible to use an inhaler.

In operations on the brain, it is recommended to use chloroform instead of ether, as hyperæmia of the brain is troublesome when the latter is employed.

With the exceptions of the states and conditions noted, ether is absolutely the safest anæsthetic. The fact of chloroform acting quicker and more pleasantly should not for a moment enter into consideration when we are solving to ourselves the question, What anæsthetic should be employed?

The pharmacology of the different anæsthetics is fully described, and that in a manner which shows that the author is both "practical" and scientific. The action and mode of using cocaine as a local anæsthetic is also entered into. A chapter on the medico-legal aspects of the administration of anæsthetics concludes this useful work. It is a volume which should be in the hands of every man who is desirous of becoming acquainted with the latest knowledge on anæsthetics. The work is one of Lewis's practical series, and is a credit to both author and publisher.

Hunterian Lectures on Tension as met with in Surgical Practice, Inflammation of Bone, and on Cranial and Intracranial Injuries. Delivered before the Royal College of Surgeons of England, June, 1888. By THOMAS BRYANT, F.R.C.S., &c. London: J. & A. Churchill, 11 New Burlington Street. 1888.

These are three interesting lectures collected together in a neat octavo volume of one hundred and fifty pages. They have already appeared separately, but must be read together to be appreciated. The first and second lectures treat almost entirely of "tension" in the soft parts and in bone, and are made eminently practical by reports of cases bearing on the subject. The third lecture is an admirable contribution to "Brain Surgery," dealing especially with the ever important subjects of concussion and compression, and the proper course to be adopted in the

various cranial and intracranial injuries. Where the inflammatory action becomes great in such cases, Mr. Bryant strongly advocates bleeding from the jugular vein or the arm, having himself saved many lives by this treatment. In the more chronic cases, mercury taken internally is strongly recommended. At the end of each lecture the author summarises the whole in a number of practical conclusions. Altogether the lectures are well worthy of perusal by the general practitioner as well as by the practical surgeon.

The Vest-Pocket Anatomist. By C. HENRI LEONARD, A.M., M.D. Fourteenth revised edition. The Illustrated Medical Journal Co., Detroit.

Although this work has reached its fourteenth edition we cannot recommend it. It is simply a *cram*-book for lazy students, and will never give anyone a proper view of anatomy. The text is of the slimmest possible character, and is intended to explain the numerous illustrations which are introduced from Gray's Anatomy. Although these sort of books are sometimes useful to refresh the memories of students going up for examination, they do much harm by inducing indolent and careless students to neglect the larger and more scientific works. This encourages a tendency to superficiality and want of thoroughness which is so characteristic of much of the work of the present day. If medical students were trained to be more thorough we should see much less of the crude generalizations and hasty conclusions which mark the majority of the articles published in the medical journals on this side of the Atlnatic.

Section-cutting and Staining. By W. S. COLMAN, M.B., Lond. London: H. K. Lewis, 136 Gower Street.

This little book at once disarms criticism, and for the very good reason that in the preface it is stated it is not intended "as an exhaustive account of different histological methods, but as a practical guide for those who are beginning to work at the subject." We have carefully read the entire book and believe it quite fulfils the purpose for which it is written. In it reference

is made to other more voluminous standard practical works, but as it contains many of the most useful new methods not contained in the former, it may be looked upon to some extent as supplementary to them, and in fact necessary to render them more complete. For any one commencing histological work it contains all the necessary instruction, and we have no hesitation in recommending it to them.

Elements of Practical Medicine. By A. H. Carter, M.D., Physician to the Queen's Hospital, Birmingham, &c. Fifth edition. London: H. K. Lewis, 136 Gower Street.

The fact of Dr. Carter's work having reached a fifth edition is a proof that it is appreciated by both student and practitioner. Although only a manual dealing with a vast subject, it deals with its matter in such a way as to present the essentials of the principles underlying the nature and treatment of disease. In this very important particular it differs from the other manuals and short treatises on this subject that we are acquainted with.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Nov. 16th, 1888.

Wm. Gardner, M.D., President, in the Chair.

Exophthalmic Goitre.—Dr. Armstrong presented a young woman, aged 24, suffering from Basedow's disease, and said: In the spring of 1888 I treated her for chronic pharyngitis and rhinitis. In July she went to the country for a few weeks. On returning from the country she first came to my office on the 27th of September. I at once noticed the prominence of the eyeballs, found the pulse beating at the rate of 136 per minute, and distinct, though moderate, enlargement of both lobes of the thyroid gland, especially the right lobe. On examining the heart a systolic blowing murmur was heard at the base, also hæmic murmur over the great vessels of the neck. Any exertion, such as climbling stairs, caused very great dyspnœa. She has not menstruated since 1st June last; is not pregnant, at least there

is no evidence of pregnancy, although patient was married in July. The eyelids follow the movements of the eyeball. I am giving her iron and quinine with belladonna for her anæmic state and applying the constant current over the sympathetic nerves in the neck twice a week. The pulse is now reduced to 96 per minute. How much of the improvement is due to the galvanism of the sympathetic and how much to the medicinal treatment I am not prepared to say. Last summer I was able to reduce the rate of the heart-beat in a marked case of exophthalmic goitre from 140 to 88, and there was at the same time a wonderful improvement in the patient's general condition. When treatment began she could hardly walk a block without resting, while in the autumn she could walk a couple of miles at a very fair rate without over much fatigue. It is only just to add, however, that I have quite recently heard indirectly that this patient has relapsed again, and is nearly, if not quite, as bad as ever. The case was an aggravated one, and of long standing before the treatment was begun.

DR. LAPTHORN SMITH had seen as many as five cases of goitre. He now treats all such cases with the continuous current of 20 milliampères, and finds that the cases are markedly improved, though they are not completely cured.

DR. MAJOR asked if nasal symptoms preceded the exophthalmos. He found, as a rule, that exophthalmic goitre was preceded by not only nasal symptoms but also severe palpitation of the heart and marked general debility. Sometimes, however, its onset is quite sudden. It seems to be very prevalent among the Jews in Germany.

DR. TRENHOLME referred to case seen by him in consultation with Dr. Ross, where the exophthalmos was very marked in a woman 50 years of age. His treatment usually consisted in improving the general health by tonics and change of life, etc., and the administration of phosphate of potash.

Hypertrophic Cirrhosis of the Liver.—DR. LAFLEUR exhibited the liver and stomach from a case of hypertrophic cirrhosis. The liver, which weighed 8 lbs. 10 ozs., was of a bright yellow color, and very firm and elastic. The capsule was thickened,

and there were a few recent adhesions between its upper surface and the diaphragm. The anterior border was thick and rounded. On section, the organ was seen to be universally bile-stained; the bile-ducts appeared to be enlarged, and from them there exuded a light yellow bile. The cut surface was marked by little elevations which were the individual lobules raised above the general surface and surrounded by depressed bands of fibrous tissue. Under the microscope these bands were found to be composed of enucleated fibrous tissue, from which finer strands passed into the lobule around each of its cells, constituting the variety known as "unicellular cirrhosis." Many of the hepatic cells were completely atrophied, while others showed marked fatty degeneration. There was no evidence of any increase in the number of bile-capillaries. The gall-bladder was empty and the bile-ducts patent. The contents of the large intestine were clay-colored, those of the small intestine of a light yellow color. The mucous membrane of the stomach, which was very thick, was thrown into deep folds, had a soft, velvety appearance, and was covered with an excess of mucus. In the kidneys, which were bile-stained and dark in color, the glomeruli and tubular epithelium were found to be swollen and œdematous. All the tissues of the body were bile-stained, the skin and mucous membranes intensely so.

Dr. Ross, under whom the patient was admitted to the hospital, stated that the history was typical of the disease. The woman, aged about 35, was a drunkard, and had suffered for years from alcoholic dyspepsia and bleeding hemorrhoids. The jaundice developed very rapidly—in a few weeks. When admitted to hospital she had decided jaundice, which rapidly deepened, was febrile, and under considerable nervous excitement, ascites was marked, the veins on the abdominal walls were enlarged, and the liver could be felt to be greatly enlarged.

Actinomycosis in a Bull.—Dr. Lafleur exhibited the brain and skull of a bull in a case of actinomycosis. The animal was a two-year-old bull, and had been suffering for a few days from some obscure nervous derangement. He was reported to have been very irritable, and had behaved strangely in a herd of

cattle. Two or three days before his death he was noticed to be unsteady on his legs and walked with difficulty. As he was becoming quite unmanageable and useless, he was killed. A diagnosis of some form of cerebral tumor or abscess was made. On examination, the upper surface of the cerebral hemispheres was found crushed and covered with clot, the result of the method adopted for killing the animal; otherwise this part of the brain was normal. On examining the cerebellum, the left lobe was found to be enlarged, very firm, covered with knob-like projections, and firmly adherent to the occipital and temporal bones. The right lobe was encroached upon and flattened. A portion of the occipital bone with the left condyle was removed with the brain. The new growth in the cerebellum was found to be firm and elastic. The cut surface showed more or less dense fibrous tissue studded with minute bright yellow specks, which were most abundant near the surface of the tumor. The knob-like projections contained a large number of these yellow points. There was no ulceration visible. The ethmoid and sphenoid bones and the temporal bone of the left side were invaded by the new growth, the sinuses being filled with, and the cancellated tissue replaced by, a soft, spongy, gelatinous substance dotted over with the above-mentioned yellow points. In the temporal bone one of the deposits had softened into thick creamy pus. The external auditory meatus was lined with the same gelatinous material. On dividing the skull longitudinally in the median line, a red, strawberry-like nodule, studded with small yellowish grains, was found occupying the orifice of the Eustachian tube at the most remote part of the pharynx. This was found to be continuous with the diseased growths in the ear and in the bones of the skull. No disease was found in the upper and the lower maxillary bones. On microscopic examination, the small yellow granules both in the cerebellar growth and in that of the bones were found to consist of more or less regular star-shaped groups of the actinomyces fungus. In the cerebellum there was a large amount of recent small-celled inflammatory granulation tissue about these groups of fungi.

Epithelioma of the Uterus.—Dr. Lafleur showed a uterus

removed by Dr. Wm. Gardner for malignant disease of the cervix. The growth was limited to the vaginal portion of the cervix, which presented a small fungating mass of granulations showing epithelial infiltration.

Dr. Gardner said this case was of particular interest, as malignant disease of the cervix was rare in a patient so young. She was but 24 years of age, had been married five years, and was twice pregnant to full term. She had suffered from hemorrhages and other uterine symptoms since last May. He first scraped away the diseased portion and then cauterized. The growth presented the characteristic fungoid appearance, and was easily removed by the curette. After ascertaining the nature of the disease he decided on removal of the uterus, and, of course, the appendages also. The uterus was extirpated by the vaginal method, and the ovaries were found to be decidedly enlarged. This is the ninth day since the operation, and the patient's recovery so far has been rapid and uneventful. The chief interest of the case was the early age of the patient.

Suppurating Appendicitis with Pyæmia and Stricture.—Dr. Lafleur exhibited for Dr. Bell the organs from a case of stricture of the urethra complicated by suppurative appendicitis and pyæmia. The stricture was single, annular and symmetrical, situated in the bulbous portion of the urethra. There were marks of old false passages around it, and a more recent one on the right side of the urethra which showed slight inflammatory reaction. The muscular wall of the bladder was hypertrophied and the mucous membrane thickened and pigmented. The abdomen contained fifty ounces of turbid yellowish fluid containing flakes of lymph, and there was lymph deposited both on the parietal and on the visceral peritoneum. The peritoneal inflammation was most intense about the liver, which was its starting point. The liver itself wae honeycombed with abscess cavities of various sizes, formed by fusion of numerous suppurating foci, filled with thick offensive, greenish-yellow pus. The infection had spread to both pleural cavities, producing on the right side a sero-purulent pleuritis, and on the left a localized adhesion to the pericardium, which in its turn had become inflamed, a complete recent plastic

pericarditis resulting. The appendix was situated beneath the cæcum, and at first appeared normal, but on dissecting it out there was evidence of inflammatory thickening around it, and when slit open it was found to be filled with pus and its mucous membrane ulcerated and deeply pigmented. No foreign body could be detected in its lumen. The infection had been carried to the liver through some small radicle of the portal vein involved in the suppuration about the appendix.

DR. RODDICK asked why Dr. Lafleur regarded the appendix as the centre of origin for the pyæmia. If the origin of the pyæmia was in the prostate, an early perineal section might have been of great service.

DR. GEO. ROSS said the case was of medical interest, as cases of pyæmia of uncertain origin are not rare. He was sorry the history of the case was so unsatisfactory, but from the results of the post-mortem he did not think the source of the pyæmia to be in the urinary tract. In life the evidences of peritonitis were not at all marked.

Suppurating Cystic Ovary.—DR. TRENHOLME exhibited an ovarian tumor removed from a child 14 years of age, which weighed 14 to 15 lbs. It grew very rapidly, not three months since it was first noticed. The operation was of unusual difficulty owing to numerous and dense adhesions. Although there was a rise of temperature after the operation (100°–103°) the patient was now rapidly recovering.

Fibroid Tumor of the Thyroid.—DR. ARMSTRONG presented the enlarged right lobe of a thyroid gland which he had removed ten days previously from the neck of a little boy 3½ years old. The mother stated that that side of his neck was large at birth. It had grown slowly until six weeks before it was removed, when the increase in size became suddenly quite rapid, and reached the size of a large orange. Breathing during rest was not interfered with, but became difficult on active exertion. The growth was slowly shelled out, each vessel being tied twice before dividing. There was scarcely any hemorrhage at all. Recovery perfect and without an unfavorable symptom. The stitches were removed on the seventh day, and union was complete.

DR. LAFLEUR prepared and examined a section, and found the growth to be of the nature of a hypertrophy.

DR. SHEPHERD said he had removed a similar tumor from a child. The growth was connected to the gland by a small isthmus. It seemed like a supernumerary thyroid.

Sarcoma of the Nares.—DR. MAJOR exhibited a specimen from a case of spindle-celled sarcoma of the nose. The tumor occurred on the left side and showed externally. It was attached by a pedicle and was removed by a cold wire snare. The point of origin was destroyed by the galvano-cautery. The intention was to punch out the seat of origin, but as all trace of the site was lost, it was deemed best to defer doing so, awaiting recurrence. Meantime the case is under observation. The growth developed very rapidly and attained the size of a small pigeon's egg in six weeks. Dr. Lafleur made the microscopic examination of the specimen. The patient was referred to Dr. Major by Dr. Phelan of Napanee, Ont.

Some Cases of Retropharyngeal Abscess in Children.—DR. A. D. BLACKADER read a paper on this subject.

Discussion.—DR. HINGSTON did not think these cases were rare. He had met with a great many in his practice. He always opened by means of a concealed bistoury. He did not think an anæsthetic was necessary or advisable, as where you can introduce your finger you can use an instrument, and there is less danger of the contents of the abscess finding its way into the trachea when no anæsthetic is given. He could not regard the practice of pressing out the pus from an abscess cavity as good surgery.

DR. MAJOR had met with three or four cases. He opened the cavity by a vertical incision, and the wound usually healed up in four or five days. In none of his cases were the children robust. The affection seems peculiar to children of a strumous diathesis.

DR. RODDICK referred to a case of a child three months old in the hospital in which the most alarming symptoms were present. Very difficult breathing and signs of pressure on the vessels of the neck. All these symptoms were immediately relieved by

opening the abscess. The pus was reached by a director, the opening enlarged, and a drainage-tube introduced. The commonest cause in adults is necrosis of the cervical vertebræ. Death has resulted from opening these abscesses without providing support for the necrosed vertebra owing to pressure on the spinal cord. If the abscess point in the neck, it is always safer and easier to open at the side.

Dr. Shepherd said the treatment and prognosis of these abscesses depend on whether they are localized or diffuse. According to his experience, most of these abscesses can be opened from the side of the neck.

Dr. Ross said a recent case of his illustrated the difficulty of diagnosis referred to by the reader of the paper. The child was able to swallow, but had a number of convulsions, and was evidently in considerable pain, but no cause could be made out. He examined the throat at his first visit, but was not able to do so thoroughly, and overlooked the abscess. After the abscess burst, the convulsions and other symptoms ceased. He could recall another case where there was a strumous family history, and where the child subsequently died from hydrocephalus.

Dr. Trenholme had opened these abscesses by incision behind the mastoid muscle.

Dr. Blackader, in reply, stated that as he always opens these abscess cavities high up to prevent entrance of fluids, he found it advantageous to use pressure to evacuate the pus. To prevent the serious accident of allowing pus to enter the trachea he usually operated with the patient prone on a table with the head over the side.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 20th, 1888.

The President, A. Jacobi, M.D., in the Chair.

Dr. Thos. E. Satterthwaite read a paper entitled, *A New Study of Lobar Pneumonia, with Deductions from an Analysis of Fifty-six Fatal Cases.* Epidemic pneumonia, he said, does not prevail to any great extent at the present time, yet a certain number of facts sustain the theory that the disease is occasion-

ally epidemic. His paper treated of lobar pneumonia in its primary and secondary forms; the first form he called acute lobar pneumonia, and the other, secondary pneumonia. But to avoid obscurity he mentioned the principal types of pneumonia, which are acute lobar pneumonia, secondary lobar pneumonia, embolic lobar pneumonia, bronchial lobular pneumonia, and the interstitial pneumonia of heart disease. Acute lobar or croupous pneumonia is the most common form. In one hundred fatal cases, taken from his hospital and private records, the several varieties were represnted as follows: Acute lobar, 36 per cent.; secondary lobar, 19 per cent.; bronchial-lobular, 20 per cent.; interstitial of heart disease, 7 per cent. He has found it most common in males. It is for the most part a disease of middle life, and occurs almost altogether in northern and middle latitudes. When it originates in one lung it usually selects the right, and in his cases commenced in a lower lobe. In the stage of engorgement the whole lung tissue is increased in volume, infiltrated with a serous fluid, with more or less transudation of blood from the vessels. In the second stage, or stage of red hepatization, the lung is of a deep red color, unyielding to the touch, and difficult to distinguish from an inflamed liver. It contains little, if any, air, and almost no fluid. Its cut surface has a granular and dull aspect, each speck corresponding to an air vesicle or cut bronchiole filled with a firm pellet consisting of blood cells and epithelium mixed with fibrine, which hold all firmly together. In the third stage, that of gray hepatization, the reddish tint yield to a dirty gray, at first tinged with brown, and then with yellow; the tissue is softer, and on pressure exudes a small amount of fluid; the walls of the blood-vessels are studded with leucocytes; in many cases there is dark pigmentation of the interlobular spaces. The lung may weigh sixty ounces.

In Dr. Satterthwaite's experience the order of the symptoms is as follows: (1) Pain, prostration, and cough; (2) a severe chill; (3) nausea; (4) rise of temperature. Chilly sensations may take the place of a severe chill. Within a few hours the temperature commonly reaches 103° or 104°. An early sign,

though seldom the earliest, is fine crepitation heard only during inspiration. Occasionally this sign lasts the full course of the disease. As soon as the second stage begins there is dulness on percussion, with bronchial breathing and bronchophony, and also increased vocal fremitus. In the fourth stage, that of resolution, returning crepitant râle is heard. The author is inclined to think that the locality of the affection, whether in the upper or lower lobe, does not influence the production of cough or affect its character. In old people cough may be absent. The expectoration is peculiarly tenacious and variously colored. The characteristic prune-juice color is sometimes absent, and is replaced by a red, black or green color; or the expectoration may be colorless. The characteristic sputum of pneumonia has three qualities—color, consistence, and coalescence. It may appear on the first day, or not until the third or fourth. It is not always present, and may occur occasionally when no pneumonia exists, as in nasal or pharyngeal catarrh with hemorrhage, or in acute laryngitis. Diarrhœa is often present, and so are nausea and vomiting. The urine is often scanty. Albuminuria is common, and is usually most marked at the height of the disease. There was kidney trouble in 41 per cent. of his cases; in 5 per cent. of these chronic kidney trouble of long standing existed; in only 8 per cent. was it shown by clinical and post-mortem evidence that there was no urinary implication. The greatest danger occurs in an exacerbation of an old kidney affection. Little has been added to our knowledge of the clinical aspects of pneumonia since the studies of Laennec. In the stage of engorgement we may expect to find dulness, but we do not. Grisolle found in this stage loss of elasticity in the chest walls, especially when percussed in the supra- and infra-spinous fossæ. The crepitant râle was regarded by Laennec as the first pathognomonic sign. It is produced by fluid matter passing into the vesicles of the lung. In some seasons it is rarely heard; in old people it may be replaced by a coarse crepitant râle. Fine crepitation may be heard in other types of pneumonia, in pulmonary phthisis and syphilis, and even in bronchitis. Prolonged expiration precedes tubular or bronchial breathing. Broncho-

phony and metallic voice, when considerable area of dulness exists, are also signs. Pain is most frequent in the region of the nipple ; next, at the base of the lung. It may be felt at any part of the chest. It is due to pleurisy. The pulse is usually 100 or more, and may reach 160. Jaundice is not very infrequent, delirium is common. Coma occurred in three per cent. of his cases ; it is often uræmic. At first the respiration rises from 22 to 36 per minute, but within two days it may reach 40, 50, or 60. Inflammation of the lower lobe seems to produce more oppression than inflammation of the upper. In children the temperature reaches a greater height than in adults. It rises one or two degrees at night, and falls in the morning. The highest temperature in his case was 108°, the lowest 100.2° ; ten cases the highest average temperature was 104.3°. The crisis usually occurs between the fifth and seventh days. Unless there are unusual complications or sequelæ it never occurs later than the fourteenth. The immediate cause of death is usually heart failure from prolonged and exhaustive work, or from the influence of poisoned blood on the nerve centres.

In speaking of the etiology, Dr. Satterthwaite quoted Sturges's opinion that it was produced by cold, dry, penetrating winds ; some later writers, however, think cold an infrequent cause. Twenty-two per cent. of his own cases were ascribed to exposure to cold. The disease seldom occurs during the warmer mouths. Occupation has little bearing on the causation. Regarding the influence of micro-organisms, it would be necessary, to prove that they are a cause, to show that a pure culture inoculated in the blood remote from the lungs would produce lobar pneumonia ; but experiments have almost always failed in this respect, and when the lung itself has been inoculated, lobular (not lobar) pneumonia has commonly resulted. The pleura is always involved except in the rare instances when the inflammation remains central. A comparatively frequent complication is pericarditis ; a more important complication is disease of the kidneys. The spleen is apt to be enlarged, and there is catarrh of the intestinal tract. True abscess of the lung is rare. Gangrene was noted in his cases. He does not believe phthisis could ever

develop from acute lobar pneumonia. The question of mortality, he said, has given rise to much dispute, largely because of indefinite statistics. Its discussion, to be of value, requires a knowledge of the variety; the patient's age; the general character of the attack. At some seasons the mortality is greater than at others, notwithstanding the same general treatment. Statistics before the middle of the present century give a mortality of from 16 to 55 per cent. Just before the middle of this century Skoda published statistics tending to prove that pneumonia is a self-limited disease. About 1842 Fleischmann, a homœopath, had a mortality of less than 6 per cent., which set other physicians thinking, and gradually led to less heroic treatment. The fact that the mortality varies in the hands of the same physicians shows that each case stands by itself. Dr. Satterthwaite's own experience shows that the expectant plan of treatment is best. The causes of death show what should be the direction of treatment. It should not be the reduction of temperature so much as the sustaining of the heart and obviating renal complications. The author has been led to believe by post-mortem studies that antipyretics not only weaken the heart's action, but also have some unfavorable action on the kidneys. Every case of acute lobar pneumonia should be treated by itself, and the indications met as they arise. He has often seen benefit from copious repeated cuppings in sthenic cases. In less vigorous persons relief often follows cold water applications. In defective hepatic action relief has come from large doses of mercurials. In weak heart patients have been carried through with alcoholic stimulants. In renal complications marked relief of pulmonary symptoms has followed remedies directed chiefly to the kidneys.

The author then passed to the consideration of secondary lobar pneumonia. This subdivision had been recognized by the old French school. His views of it are based upon nineteen of his recorded cases. Without committing himself to an opinion as to their etiological value, he has found the antecedent conditions as follows: Nephritis in 5; alcoholism in 2; phthisis in 2; burns in 2; rheumatism in 1; fracture of the ribs in 1; hypertrophy of the heart in 1; pleurisy with effusion in 1; pericar-

dial effusion in 1. Contemporaneous affections were present as follows: Abdominal dropsy in 1; pericardial effusion in 1; gangrene of the extremities in 1; aneurism of the aorta in 1; bronchitis in 2; syphilis in 2; endocarditis in 2; hydrothorax in 1. Cases in which there was a suspicion of phthisis or syphilis were not included. Secondary pneumonia is usually insidious. Chill is frequently absent, and when present is not severe. Difficulty in breathing may not be marked. The crepitant râle is heard as a rule. The temperature rises rapidly, as in acute lobar pneumonia, but averages somewhat lower in range. The pulse often rises sharply at the outset, but averages lower than in the acute form. Bronchial breathing and dulness may be the most decided symptoms, and in his experience they have been the most common. The expectoration is apt to be scanty and afford little help in diagnosis. Renal symptoms are likely to be more prominent than in the acute disease. There is a decided tendency to suppuration. The duration is about the same as in acute pneumonia, but the crisis is likely to come earlier. The causes of death are about as in acute lobar pneumonia, and indidicate the treatment.—*Medical and Surgical Reporter.*

Correspondence.

MUNICH, Dec. 10th, 1888.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

DEAR SIRS,—In availing myself of your gracious permission to send anything I thought would be of general interest, I cannot help thinking that the actual working of a German medical school can be well seen in a place like Munich, where strangers are the exception and not the rule. The school is a very large one, there having been actually more students in attendance during the previous summer, than at Berlin. How thirteen hundred and odd medical students could possibly be educated in a city of two hundred thousand would seem a difficult problem, but the amount of clinical and pathological material available here is simply astonishing. Besides a maternity hospital, an eye hospital, and one for children, there are two large general hospitals, the largest having about seven

hundred beds. In connection with the pathological institute about one thousand autopsies are held every year. In this way the amount of objective teaching done compares favorably with that in much larger cities.

A recent event of special interest was the celebration of Professor Pettenkofer's seventieth birthday. The festivities began a week ago and are not quite finished yet. I had, of course, like everyone else, heard of a Pettenkofer, as the inventor of a very complicated test for bile acids, which I could never get to work properly; and I had also heard of a Pettenkofer who had a theory about something or other which theory I could never understand, much less believe in. I confessed to be surprised on learning that these twain were one Pettenkofer; but no one not living in Munich would appreciate the enormous influence he possesses in sanitary affairs. He planned and carried out a series of sanitary reforms which transformed Munich from being about the most unhealthy city in Europe into one of the healthiest, typhoid fever being now happily so rare here that the professors are often at a loss for a case to show to the class. He refused to accept the chair of Hygiene at Vienna, and even declined to accept the directorship of the Reich's Gesundheits Amt. in Berlin, preferring to remain in Munich, which city, in consequence, is never tired of showing its gratitude to him. On his seventieth birthday he was, among other events, honored by a deputation consisting of the Mayor and Corporation, who presented him with a formal address, and in the evening a grand dinner in his honor was given by the city, at which everyone of note in the official world here was present. The people here when they find a man whom they delight to honor take certainly care to do it frequently enough. A professor can be *fêted*, for instance, at his fiftieth, sixtieth, and seventieth birthdays respectively, and, after that, still more frequently, say every five years or so as he gets older and more and more of a curiosity. But in the intervals as well they can amuse themselves by finding out other occasions suitable for festivities, such as the twenty-fifth anniversary of his obtaining a professor-

ship, etc., or even his silver wedding, if nothing more appropriate chances to fall due in that year.

When, a few years ago, bacteriology suddenly assumed such importance in relation to hygiene, no one could reasonably expect that Professor Pettenkofer would, at his advanced age, actively interest himself in this subject, and it is only natural that, under the circumstances, while Koch is having his innings Pettenkofer should assume the *rôle* of leader of "Her Majesty's loyal opposition." Accordingly his attitude towards the Berlin school has from the outset been that of a critic, and no doubt his great ability and energy have done much towards preventing the premature acceptance of doctrines whose truth was not clearly demonstrated.

While, however, this passive and critical opposition has been productive of the best results, some of his too ardent followers have done themselves more harm than good by setting up an active and aggressive opposition. For instance, when a harmless and inoffensive bacillus, which had always been quite content to get along in a small way in the larger intestine, was suddenly dragged forth and made to pose as the opposition's candidate for the seat (or rather stool) of Asiatic cholera the result was disastrous.

One of the most interesting things in connection with the hospital here, and one which is not as generally known as it should be, is the clinical institute. This is a roomy, two-story building, forming a wing to the medical wards. It was built under the direction of Professor Ziemssen about six years ago, and it is intended to afford every opportunity for carrying out the scientific study of medical cases. It comprises, besides a large lecture room and several laboratories for microscopical original work, a large and well equipped laboratory exclusively devoted to clinical chemistry, a bacteriological laboratory, and a complete reference library.

There are two other rooms for electrical apparatus with which, (as well as with every other conceivable necessary appliance), the institute is replete. The outdoor medical clinic is also held in this building, which makes this clinic one of the most fruitful

in higher scientific results, instead of being merely one where students see a large number of cases or, still worse, witness "routine practice."

Professor Ziemssen, of course, reigns supreme here. There is, at present, only one regular assistant, the intention being more to afford every opportunity for original work than for the ordinary instruction of students. Considering that the institute alone has a yearly grant of three thousand dollars, one might perhaps expect something more systematic. The success of this clinical institute has led to the building of a similar one in connection with the surgical clinic.

During a trip to Switzerland I was shocked to find that our old friend Baedeker (usually so painfully explicit) cautions the unwary traveller (p. 21) against drinking water without first qualifying it with wine or spirits, and further states that milk is much *safer* when brandy has been added to it. From what I saw of the average tourist it did not strike me that he needed a Baedeker to tell him to add brandy to the above mentioned fluids. What he really does need is that some one should hint that brandy is "less injurious" when a little water or milk has been added to it. Baedeker also recommends the following panacea for the healing of wounds: "Half ounce of white wax, half ounce of tallow, three-quarters of an ounce of olive oil, and one and a half drachms of vinegar of lead rubbed together." To one who has never written a guide book this sounds just a trifle complicated; it savors further of the middle ages, and one is inclined to wonder why he did not add "the hair and back teeth of a tourist who has been killed by falling down a precipice" while he was about it, but probably the Baedeker of the future will contain a treatise on antiseptic surgery and ptomaines. I had intended to write something about the teaching of pathology here and in England, but as this letter has already become so long I will reserve it for another occasion, always supposing that the present letter does not act too powerfully as a cardiac depressant.

W. G. J.

A CASE IN PRACTICE.

By C. J. Edgar, M.D., Inverness, P.Q.

Mrs. M., aged 35, consulted me October 10th, 1887, for an enlargement of the abdomen, accompanied with metrorrhagia and failure of the general health. Had been married five years; had one child four years ago, but none since. Menses had not been regular for some time, but she had not noticed the lump until about four months previously. On external examination, found clothes drenched with a bloody discharge and the uterus about the size of a child's head, nodulated and irregular in shape. On internal examination, uterus large, retroverted, freely movable, and a large, hard mass distinctly felt in its posterior wall. Diagnosed fibro-myomata, and prescribed fluid ext. ergot 10 ♏, potass. iodid. 10 grs., and a tonic mixture, t.i.d. Tumor continued to grow rapidly, and metrorrhagia continued as profuse as before for a week, when both ergot and potass. iodid. were doubled in dose, which seemed to arrest the growth of the tumor and diminish the discharge. A week later grasping pains were felt occasionally in the uterus, and the tumor had distinctly decreased in size.

Nov. 17.—Her husband came during my absence to request my attendance at once. On my return two hours later I found the woman in bed, very pale and excited. A bundle was produced from under the bed, in which, wrapped up carefully, was our fibroid complete, enucleated and discharged entire; weight 14 ounces. It is a good specimen of the fibro-myomata, composed almost entirely of fibrous tissue and very hard. The woman confessed that, getting tired of her slow improvement, she had taken, at one dose, a tablespoonful (℥iss) of the fluid extract ergot, with the result of bringing on tremendous labor pains and the discharge of the fibroid. The uterus was contracted firmly to its normal size, and was perfectly regular in shape.

In a few days she resumed her household duties, and continued perfectly well for six months, when she returned complaining of another tumor in the same place. This time, however, we let things alone, and on November 12th, 1888, I had the pleasure of delivering her of a fine ten-pound girl. Labor was rapid and easy, and the uterus seems to be perfectly healthy and normal.

THE

Montreal Medical Journal.

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MUNIFICENT DONATION.

By the will of the late Alexander Murray of this city, the Montreal General Hospital will come into possession of the princely sum of $750,000. Next to the great donation of $1,000,000 made by Sir Donald A. Smith and Sir George Stephen for the founding of the Royal Victoria Hospital of this city, that of Mr. Murray's is the largest ever made in Canada for any similar purpose.

THE EXCESSIVE DIDACTIC WORK DEMANDED OF STUDENTS BY THE CANADIAN LICENSING BODIES.

We are pleased to see a number of our contemporaries seriously discussing the present regulations of the different licensing boards. All agree that in demanding two full didactic courses of nearly all branches, a large amount of unnecessary work is thrown on the students. Some call for an immediate change in these requirements, while others maintain that it would be premature to interfere to any extent at the present time. We are strongly of the opinion that the sooner the proposed changes come the better for the profession. We fail to see what dangers lurk in their immediate adoption. Owing to the demands of the different Provincial Boards, medical students in Canada are seriously handicapped as compared with their brethren in England and the continent of Europe. So much time has to be devoted to listening to didactic lectures, that little is left for laboratory work. As a proof of this we would point to the paucity of

laboratories in Canadian medical schools. With the exception of chemical laboratories, a large percentage of our schools are utterly destitute in this respect. We have twelve medical schools in Canada, and of this number we believe that not more than one or two can lay any claim to being thoroughly equipped with the means of imparting more than an hearsay acquaintance with the scientific branches of our profession. Those schools which are provided with these essentials find their usefulness greatly curtailed owing to so much of the students' time being occupied in listening to lectures. The result is that the training of the senses is in a great measure neglected. It has been well said that the training of the five senses keeps us sane. The excessive didactic work interferes also with the clinical teaching. The great importance of the latter is, of course, universally admitted. The requirements of the boards, however, are of such an exacting nature that it is utterly impossible for students to make the most of the clinical advantages presented to them. Except during the summer sessions, they cannot attend the out-door work of the hospitals, and they are therefore deprived of an important aid to the ward-teaching.

The advantages that would accrue to the student from such a change in the curriculum as would enable him to devote more time to the laboratory and hospital and less to the lecture-room, would be very great indeed. We cannot understand how it is possible for any enlightened medical practitioner to entertain a contrary opinion. Admitting the equal importance of lecture, laboratory, and clinical teaching, why should the former have such a marked pre-eminence over the two latter? We sincerely hope that this question will not be allowed to rest until our medical law-makers are thoroughly aroused to its importance. In the different Provincial Medical Boards there are many able and progressive men. They never had a better opportunity than the present to be of use in their day and generation.

CALOMEL AS A DIURETIC.

Ignatjew (*St. Petersburger Med. Woch.*) gives an account of his experience of the administration of calomel in forty-eight

cases of dropsy. He found, as others have found, that it is only in dropsy of cardiac origin that this agent is to be relied upon to produce diuresis. Its diuretic action in these cases is first noticed usually from two to four days after it is given, and lasts from three to five days, exceptionally two to three weeks. In eight of the forty-eight cases stomatitis and diarrhœa set in. In only one instance did the stomatitis prove troublesome. He looks upon a combination with small doses of opium (gr. 1-6) as in a measure preventive of the diarrhœa and stomatitis. For the prevention of the latter, nothing is, however, equal to the frequent washings of the mouth and especially the gums with an antiseptic solution. He recommends doses of from two to three grains four times in the twenty-four hours. Sygmographic tracings of the pulse did not show any change from the normal. As far as we are able to judge at present, the action of calomel is solely on the epithelial structures of the kidneys.

THE UNTOWARD EFFECTS OF ANTIPYRIN.

Recent experience tends to prove that occasionally very unpleasant and even serious effects follow the use of antipyrin when administered either for its antipyretic or analgesic action. In the January number of *Heitler's Centralblatt für Theropie* there is a reference to a paper by Prof. Drasche of Vienna on this subject. He has found nausea and even vomiting not infrequently. These symptoms are especially frequent in women, and occur occasionally when the drug is given by the rectum, showing that it induces vomiting either reflexly or directly by being eliminated by the mucous membrane of the stomach.

Skin rashes are not uncommon, the most frequent form being miliaria alba. Petechial spots have been noticed, especially where the drug has been employed as an antipyretic in typhoid fever.

In typhoid, pneumonia and tuberculosis, profuse sweating is frequently seen. This symptom is not of serious import unless attended by a marked fall in the blood pressure. Drasche has observed marked collapse in several cases from even moderate doses.

Israël observed convulsions in two cases and deep coma in the case of a girl 11 years of age. Temporary albuminuria and decrease in the quantity of urine have been noted by several observers. Among minor symptoms may be mentioned sneezing, œdema of the eyelids, restlessness, retention of the urine, etc. Undoubtedly the most important of all these symptoms mentioned is the lowered blood pressure and the coma and convulsions. Fortunately such effects are rare indeed, but it is necessary to be always on our guard, especially when prescribing it in typhoid, as much harm may result from its indiscriminate employment in this and other febrile diseases. Neither the dose or condition of the patient are certain guides,—individual susceptibility is very various and cannot be estimated. In children its administration should be especially watched, as in them the danger of serious nervous symptoms are more frequent.

THE PATHOLOGY OF CHRONIC ALCOHOLISM.

The extremely interesting discussion at the Pathological Society of London on the demonstrable changes brought about by alcohol on the various organs of the body, has terminated. The discussion was introduced in an able manner by Dr. Payne. Drs. Buzzard, Savage, Hadden, Sharkey, Ormerod and others contributed valuable information. The frequency of changes in the liver and peripheral nervous system, as compared to all other organs and tissues, was especially insisted on by nearly all the speakers. The interstitial origin of the hepatic changes found nearly general acceptance, while there was considerable diversity of opinion as to whether the peripheral neuritis had a parenchymatous or interstitial beginning. The infrequency of central nervous changes was prominently brought forward. The discussion will well repay a close and careful study.

COMPRESSED TABLET TRITURATES.

During the past decade the improvement in our methods of the administration of drugs has been great indeed. The most recent, and we believe the most important, improvement of all is the use of the tablet triturates, introduced by John Wyeth and Brother. In this form we have for some time prescribed

a number of the more powerful alkaloids and such agents as aconite, arsenic, etc., and with the most satisfactory results. Our experience has been such as to warrant a complete faith in the reliability of these preparations. The certainty of the physiological effects following the use of the more powerful agents when given by the stomach in this form closely approaches that of the same agents when given hypodermically. This is to be attributed to their rapid disintegration and absorption. It may be said that in tablet triturates we have a mode of administering drugs by the stomach, possessing nearly all the advantages, with none of the disadvantages, of hypodermic medication. The recent list of triturates issued by John Wyeth and Brother includes all the leading medicinal agents at present employed.

—The Government of this Province propose to amend the Act respecting lunatic asylums. The phraseology of the proposed bill is of such character that we find it impossible to make out its meaning. It is to be hoped that the contemplated changes will be an improvement on the present state of matters. They cannot well be a backward step, for nothing can be much worse than the methods of managing the insane in this province.

—The profound disturbance of metabolism after an epileptic storm is shown by the researches of Rivano, who found, as the result of the examination of the urine in six epileptics, a mean increase of urea to the extent of nine per cent. The phosphoric acid was increased to thirty-three per cent. Even in attacks of *petit mal* there was a distinct increase in the urea and phosphoric acid.

—The Société de Médecine Legale of Paris have passed the following wise resolution: "We hope that public exhibitions of hypnotism will be forbidden by law, owing to the numerous accidents they produce in innocent persons, which compel them to seek medical treatment for months." We hope that a similar law will be enacted in Canada. No country stands in greater need of it. Our lay press will have to be educated beyond their present scientific standard before we can expect

any such legislation. Montreal is yearly visited by rapacious charlatans who make money by public exhibitions of people in the hypnotic state.

—The treatment of ascites by faradization of the muscles of the abdomen is said to be frequently successful. A sufficient strength of current to bring about distinct muscular contraction is recommended. One pole can be placed over the lumbar spine, or probably over an indifferent place, while the other is to be passed over the abdomen. From one to three sittings daily of ten minutes' duration are considered necessary.

—In a recent paper in the *London Lancet*, Drs. Winkler and Ballaan contend that instrumental delivery of the child is in a few cases the direct cause of idiocy. Dr. Langdon Down points out the fallacy of the above conclusion. In his experience of idiocy, he found that in only three per cent. were the forceps employed. In only a small fractional percentage could he arrive at the conclusion that the use of the forceps was the principal cause of the calamity. In every case of idiocy where they had been employed, the friends of the child believed that the instruments alone was the cause of the disaster, while in the great majority of the cases he was able to find in the family history a sufficient cause.

NEW LIGHT ON AN OLD SUBJECT.—In view of the approaching Carnival the following extract from Mr. J. E. Muddock's Guide to Davos Platz may not prove altogether uninteresting or uninstructive : " In addition to the pedestrian and sleighing excursions, the visitor will be able to find amusement in the Canadian exercise of *Tobogging*. The toboggan consists of a small wooden sleigh, the seat being composed of bars of wood. Seating yourself on this, you glide swiftly down a suitable snow slope, steering the sleigh with your heels, which project forward, or by means of two small sticks trailed behind. The latter method, however, is difficult and requires practice. The exercise is most enjoyable and exhilarating. It will be interesting to state that the word 'Tobogging' was introduced by the Gaelic speaking emigrants to Canada. It is

composed of the Celtic or Gaelic 'tob'—a surprise, and especially a pleasant surprise; and of 'bogadar'—a rapid motion, a shaking, a sliding; whence 'tobogging,' the rapid and pleasant descent down an ice or snow path."

Medical Items.

—A recent writer contends that the use of tobacco is a preventive of diphtheria.

—Dr. Osler will deliver an address on the 3rd of April next, before the Society of the Alumni of Bellevue Hospital.

—Dr. S. Weir Mitchell has been appointed Lecturer on Diseases of the Nervous System in the Philadelphia Policlinic.

—Dr. Leopold Wittelshöfer, the founder and until within a few weeks the editor of the *Wiener Medizinische Wochenschrift*, is dead.

—The *Canadian Practitioner* has made its appearance as a fortnightly journal. We wish our enterprising contemporary every success.

—A prize of $2,500 has been offered by the Empress Augusta of Germany for the best model of a portable military hospital. All countries are invited to exhibit.

—Dr. Tyson has been appointed to the chair of Clinical Medicine in the University of Pennsylvania, rendered vacant by the appointment of Dr. Osler to the Professorship of Medicine in the Johns Hopkins University.

—We regret to have to chronicle the death of a very promising young practitioner, Dr. G. A. Dearden, in Victoria, B.C. He was in partnership with Dr. McSwain until the latter had to leave Victoria for his health; the whole of the very extensive practice of the firm falling on his shoulders proved too much for his strength. The immediate cause of death is said to have been cerebral congestion.

LITERARY.

—Seven hundred and twenty-eight is the record in numbers of the articles printed during 1888 in the *Archives of Gynæcology* on the special subjects of its title. It is the aim of the editors

to publish all current thought in these departments of medical knowledge. The publishers, Leonard & Co., 141 Broadway, New York, do not send sample copies, but if you are not pleased with the first number it may be returned and the order erased. Subscription, $3.00 per annum. Payment is not asked till end of the year.

—Messrs. J. B. Lippincott Company announce to the profession the publication of a Cyclopædia of the Diseases of Children, Medical and Surgical, by American, British, and Canadian authors, edited by John M. Keating, M.D., in four imperial octavo volumes; to be sold by subscription only. The first volume will be issued early in April, and the subsequent volumes at short intervals. A thorough knowledge of the diseases of children is a matter of the greatest importance to most physicians, and as this is the only work of the kind that has been published in English, it will be invaluable as a text-book and work of reference for the busy practitioner.

Publisher's Department.

Uterine Styptic.—John Adderley, M.D., Skibbereen, County Cork, Ireland, says: "It gives me great pleasure to add my testimony to the great value of S. H. Kennedy's Extract of Pinus Canadensis, which I consider a most valuable uterine styptic, seeming not only to possess the power of arresting uterine hemorrhage, but also to produce a healthy action of the parts. I used it with a patient who had been suffering for a number of years from menorrhagia, depending upon ulceration of the os and cervix uteri, with whom I had tried all other remedies for menorrhagia, lasting during a period of five months almost without intermission. Extract of Pinus Canadensis applied to the os uteri on cotton wool, and also used as a lotion, arrested the hemorrhage immediately, and the Aletris Cordial, which was taken internally, helped to invigorate the system and promote a cure which I had at one time considered incurable, I should not wish to be without these remedies in similar cases, and shall continue the use of them in my practice, as I consider they gave most satisfactory results."

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Original Communications.

ACUTE FARCY.

BY D. O'BRIEN, M.D., OTTAWA.

On the 27th of last November I was asked to see Mr. D., a man about 37 years of age, well-nourished, of good family history, and had always enjoyed good health. He had been employed as an assistant with a man named Alexander, who keeps a stable for diseased horses, and had constantly under their care several of those diseased animals. Four days previous, I was told, my patient had been hurt whilst attending one of those animals, and since then was complaining of a very severe headache, frontal in character and was increasing in severity, great thirst, loss of appetite and sleep, bowels constipated, and a general feeling of malaise; had no distinct chill, though he frequently complained of feeling cold; no enlargement of the glands or tenderness of the veins, though there was slight tenderness and redness along the inside of both legs, over lymphatics; nor could I discover any abrasion or external wound on the body. Pulse 100; temperature 102°. An abscess was discovered on the right arm, midway between the shoulder and elbow, in the fleshy part of the biceps muscle, circumscribed, but no redness nor much tenderness except on deep pressure, and having a soft elastic feel. Ordered poultices for the arm and five-grain doses of antipyrin to be repeated every hour if headache was not relieved.

Nov. 28th.—Headache considerably relieved by the antipyrin,

of which he had taken half a drachm in five-grain doses every consecutive hour for six hours the evening previous, but this morning at 11 A.M. is worse than ever; pulse and temperature unchanged; redness on inside of legs more defined. Opened abscess, which discharged about an ounce of bloody-looking matter. Slept none during the night; thirst excessive. Ordered two-grain pill of quinine every four hours and a quarter-grain morph. sulph. every hour in the evening till relief followed, and supporting treatment as usual, which was one ounce of old rye every four hours with plain soda water and milk *ad. lib.*, concentrated broths and the whites of four fresh eggs in the intervals.

Nov. 29th.—Slept none; headache temporarily relieved; had taken six ¼-gr. doses of morphine in as many hours; temperature 103°; pulse 106; tongue heavily coated with white fur; headache this forenoon as bad as ever; thirst increased, and had some vomiting for the first time early this morning. Face has an anxious, pinched appearance; redness and tenderness on the legs somewhat more marked; abscess discharging. My friend Dr. Powell saw the case with me this evening and concluded trying the following treatment: 15 ♏ Tr. Ferri Mur. largely diluted every four hours, and ¼-gr. doses of the sulphide of calcium every six hours, with 40-gr. doses of chloral hydrate at bedtime, to be repeated if required.

Nov. 30th.—Slept little or none, notwithstanding he had had three doses of chloral in as many hours; headache no better; temperature 103°; pulse 110. Streaks of redness on the legs more defined, with certain tender points on inside of right leg, and a sensation of hardness in area about the size of a large almond, somewhat superficial. Ordered poultices to tender points.

Dec. 2nd.—As I did not see my patient on the 1st, was told he had been complaining of pain in the knees, especially the left; there was no swelling or redness, except continuation of redness from above on inside. Opened two small abscesses on inside of right leg, discharging about a teaspoonful each of creamy-looking matter. Headache still continues, though masked,

no doubt, to some extent, by pain in knee joint. Pulse 108; temperature 103½°. Slept none; thirst as severe as ever; bowels somewhat relaxed all night, but better this morning, and did not interfere with them. Hot fomentations for knees and medicine as usual. Had three doses of chloral each hour last night and night previous.

Dec. 3rd.—Spent a very bad night; pain in left knee excruciating. Patient asked for anything that would relieve the pain: didn't care, he said, if it killed him, as long as he got relief. No swelling or redness appreciable around the joint. Pain is increased by movement. Two more nodules appeared on left leg, in the line of redness. Temperature 103°; pulse 120. Thirst continues. Had diarrhœa all night; bowels still relaxed; also says headache is as bad as ever. Ordered twenty drops deoderised tr. opium and two grains sulpho-carbolate of zinc; chloral to be discontinued.

Dec. 4th.—Had a couple of hours sleep last night. Took two doses of opium mixture inside of an hour. Pains all seem modified to some extent to-day. Temperature 102½°; pulse 112. Thirst still continues. Opened two more small abscesses on inside of left leg, discharging about same quantity and character as those opened in the right leg. Two more appearing on the outside of right leg; no superficial redness nor much tenderness, except on deep pressure; slightly raised above the surface, in a line with each other, and about three inches apart. Diarrhœa checked.

Dec. 5th.—Two abscesses opened on outside of right leg; discharged about a teaspoonful each of creamy pus; no redness superficially, but have a soft, doughy feel. Had a comparatively comfortable night. Pains not so localized in head and knees, the latter are extremely painful when moved, especially the left; no redness or any perceptible swelling around either. Temperature 102°; pulse 108. There was slight delirium last night. Opium mixture given twice during the night. Bowels satisfactory. Slept at intervals. Thirst still troublesome.

Dec. 7th.—Unfortunately missed seeing patient yesterday. Has been complaining all night of difficulty of breathing through

the nose; little or no air seems to pass through the nostrils. Pulse 120; temperature 103°. Thirst still troublesome. Pains in the knees only complained of when moved; headache not complained of so much. Two more small abscesses opened on left leg below the knee, in the line of redness. A few small red papules appearing on the face, look like acne; some more advanced and angry-looking. Patient shows signs of exhaustion and symptoms assuming a typhoid character. Sulphide of calcium discontinued to-day and 10 grains of carb. of ammon. every three hours substituted.

Dec. 8th.—Typhoid condition more marked; delirium at intervals. Temperature 103½°; pulse 120. Opened three abscesses on the inside of right leg, between knee and ankle, discharging about a drachm of the same characteristic matter, and two on right arm, between elbow and wrist. Stoppage of nostrils still continues. Some discharge came from one nostril through the night. Some of the papules now pustular in character; one large one on forehead discharging. Pains not complained of at all, except knees, and then only on movement. Does not ask for drink, but takes drink and nourishment when offered to him.

Dec. 9th.—Delirious all night, low muttering character; still delirious. Urine passes unconsciously. Temperature 103½°; pulse 128. There is considerable discharge from nostrils, thin and greenish-looking in character, not offensive in smell. Opened an abscess on right arm, below elbow, and one on the hand; all previous ones opened discharging, those opened first especially; the one on right arm has an excavated, angry-looking appearance. The large pustule on forehead has the same excavated, circular appearance.

Dec. 10th.—Temperature 103°; pulse 130, and evident loss of volume. Discharge from nostrils still continues. Considerable swelling of the forehead at and around the large discharging ulcer, erysipelatous-looking in character, deep crimson in color. Urine still flows unconsciously, and diarrhœa mixture has to be given occasionally as bowels are again becoming relaxed. Patient takes nourishment constantly, but, notwithstanding, is evidently sinking.

Dec. 11*th.*—Swelling and redness of yesterday on the forehead considerably increased, more so on one side. Nose swollen and discharge from nostrils diminished. All symptoms of yesterday exaggerated. Pulse 140; temperature 104°. Delirium and stupor more profound. Advised medicine to be stopped, as I considered it only a process of torture to persevere in them any longer, and he succumbed the following day, fifteen days from the time I first saw him, and nineteen or twenty from the onset.

Remarks.—I had considerable doubt the first few days in this unfortunate case what I had to deal with. Of one thing I was positive, that some specific poison was in this man's system. And could it be possible that all the subsequent symptoms were due to this primary abscess on the arm? I do not think so, and imagine, had I not been aware that this man had been daily exposed from his occupation to the virus of glanders or farcy, I would still have found it difficult to come to any other conclusion but a poison of some peculiar nature had found its way into this man's system. Some of the most prominent symptoms described by Niemeyer, I consider, were typical in this case. Headache, thirst, sleeplessness, pain in the knees, simulation of metastatic abscesses, pustular eruption, and finally discharge from the nostrils, all seem to point to one conclusion, that the case was one of acute farcy.

Quotation from Niemeyer.—"Both glanders and farcy appear in man. The latter form, however, is the most common, and usually attacks the skin, upon which it generally produces an eruption of tubercles. Those of the skin, subcutaneous areolar tissue, muscles and lungs are purulent rather than caseous, and in the connective tissue, muscles and lungs they bear a great similarity to metastatic abscesses. The lymphatics and their glands are likewise often implicated in the disease in man, and, as in horses, they sometimes produce a chain of farcy buttons.

Symptoms and course: The period of incubation of glanders or farcy is of variable duration. Where the virus has been implanted upon a wound the first symptoms generally appear within three or four days; but when infection occurs where there has

been no breach of surface (as when the virus has been inhaled), the malady often does not break out for months. The term prodromal stage or stage of invasion is usually applied to the period during which, although none of the lesions characteristic of glanders or farcy have as yet appeared, still, fever, constitutional disturbance, and certain subjective symptoms announce a general infection of the system. Sometimes a single rigor occurs at the beginning of the attack; in others the rigor is repeated several times. The skin grows hot, the thirst augments, pulse accelerated, the patient feels depressed and languid, pain in the head, sleeps badly, no appetite—in brief, exhibits a series of symptoms such as accompany other infectious diseases. These manifestations, however, are accompanied by another constant and somewhat characteristic phenomena—a violent pain in the joints and muscles. The seat of this pain is usually in the vicinity of the greater articulations, and is sometimes, though not always, attended by moderate swelling of the painful part. Although these articular and muscular pains often cause the disease to be mistaken for rheumatism, yet, when they occur in an individual whose history is suspicious, they may aid us in an early and correct interpretation of the symptoms. The first stage of the disease lasts for a longer or shorter period; the symptoms may increase steadily all the time, or else gradually grow milder. The aspect of the disease at this period presents many varieties, according as the malady selects one or other tissue as its seat; if it attacks the nasal mucous membrane (as glanders in the stricter sense of the term), an erysipelatous inflammation makes its appearance upon the exterior of the nose and its vicinity. The nose, eyelids and the forehead swell, assuming a dusky redness, and are covered by blebs, the precursors of gangrene. The patient cannot breathe through his nostrils, from which there flows a liquid, at first scanty, thin, and mingled with streaks of blood."

A PLEA FOR OPERATIVE OR RAPID DILATATION OF THE CERVIX UTERI.

By T. Johnson-Alloway, M.D.,
Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montreal General Hospital; Gynæcologist to the Montreal Dispensary.

Up to within four or five years ago steel uterine dilators were regarded by surgeons with a shudder somewhat akin to that experienced by visitors to the Tower of London when shown the "thumb-screw" aud other ancient instruments of torture. They saw in it a powerful render asunder of vital tissues, and that such traumatism must be followed by dangerous inflammation. It was not however thought, that forcible dilatation of like nature was practiced as the safest method of opening deep-seated abscesses situated in equally vital parts. On the other hand, gradual dilatation by tents was regarded as an easy procedure, and within the province of every busy practitioner. In fact, the practice became so general with physicians that it was considered equally as necessary to have nicely assorted sizes of sponge, tupelo and tangle tents, as it was to have a pair of obstetric forceps. As a consequence of this, unfortunate women were required to undergo intense suffering, and were often destroyed through the intervention of septic peritonitis. The employment of such methods in the past was justified only on the ground that no better were known at the time. This justification can, however, no longer hold good, and I will endeavor to show, in as short a space as possible, why the more scientific, humane, and safe method should be employed in preference to the older and more dangerous.

In the days of our first endeavors in the practice of medicine, when each man estimated his prosperity and pubic value in accordance with the number of visits he was able to pay during the current twenty-four hours, he had of necessity quite a number of patients suffering from uterine complaints. The majority of these patients suffered from endometritis in some form or another. The treatment adopted in these cases consisted in forcibly pushing a tent as far as possible into the cervical canal, allowing it to remain there for twelve to twenty-four hours, then violently pulling and

twisting it out with the view of tearing away the diseased granulations. The whole canal to the fundus uteri was then swabbed out with nitric acid, or some such escharotic. During the time this method of treatment was being carried out the suffering these poor creatures underwent could be endured only by women. The burning-hot-plate treatment, with the aid of opium, was kept up for twelve hours at least to offset the suffering caused by the gradual distension of the tent in the inflamed cervical canal. And this probably in a patient with a chronically inflamed and tender parometrium, a perimetritis, and other diseased conditions of the uterine appendages. In fact, it is appalling to one to reflect upon the amount of misery and suffering which must have been inflicted upon women during the tenting period of gynæcology. It would be impossible to estimate the number of induced attacks of acute pelvic inflammation which have occurred during this period. Many deaths have also occurred, and a majority of these I believe to have been due to a latent form of tubercle lighted up suddenly by the violence of the treatment into a fatal attack of acute tubercular peritonitis. I have seen post-mortem cases of the kind, and I am sure others have seen the same. We know how common tuberculosis of the peritoneum is in tubercular women, and how latent and unobserved it will remain until accident happens to kindle it into an acutely fatal disease. From a careful consideration of these facts I feel convinced that many so-called delicate women have been killed prematurely by the use of tents and escharotics in the treatment of chronic uterine disease. Of the many deaths occurring from this method of treatment a few have been reported. In the *Amer. Jour. of Obstet.*, 1881, page 666, is reported a case by Dr. W. T. Lusk of death from septicæmia following the repeated introduction of sponge and tupelo tents. At the same meeting Dr. T. A. Emmet spoke of a case in which septic peritonitis followed the use of a sponge tent, the disease developing on the seventh day after its introduction. Dr. Emmet said that he had come to feel that he almost took the life of the patient in his hands when he used a sponge-tent. At the same meeting Dr. Janvrin showed the

specimen of a case in which pelvic cellulitis, abscess and death followed dilatation by a tupelo tent and stem pessary. During the discussion on these cases it was universally thought that the prolonged local irritation, together with the introduction of septic matter, was the direct cause of trouble.

In the same journal (1885), page 952, Dr. C. C. Lea reports a case of perforation of the cervix uteri by a laminaria tent. Dr. Mundé also spoke of similar cases. And in the issue of 1888, Dr. C. C. Lea presented a specimen of a case of death due to septic peritonitis following dilatation of the cervix uteri by laminaria tents. Without going any further into the misfortunes of tents in general, we may ask ourselves, Why has dilatation by tents been so much practised during the past twenty years when death or destruction of health has always been considered in the balance? I can only answer such a question by repeating Emmet's conviction above quoted, "that he always, when using tents, held the patient's life in his hands"; and Marion Sims' statement that he never used them when he could possibly avoid it, and never applied them without apologising to the patient for the very unpleasant effects they produce. Sims also stated that he who gives an efficient, safe, and pleasant substitute for tents will confer a great boon on surgery. Marion Sims' book, "Uterine Surgery," written in 1865, undoubtedly has been responsible for the great generalization of the practice. He, however, tells us that it is necessary, before using them, to explain to the patient (1) that the tent may possibly cause some uneasiness; (2) that it will certainly produce a dirty, disagreeable, bad-smelling discharge; and (3) that it will be necessary to see her in six or eight hours to remove the tent and probably to introduce another.

Judging from such advice to his patient, from such a man, the use of the tent in gynæcology could only have been justified by the general status of surgery at that time. Sims, in his honesty of purpose, knew that it was a dirty, bad smelling, dangerous thing, and felt that improved methods would surely come.

The reason of the fœtid discharge from the uterus after removal of the tent is because the operation has been a septic

process. It is absurd to think that tents can be made aseptic by any process whatsoever. The instrument makers are responsible for nothing but the shape and size of the tent, notwithstanding how positively they assure us that those of their special make are aseptic.

It is not my intention to describe precisely the operation of rapid dilatation of the cervical canal by means of the steel dilator, but I *do* wish to speak of the great advantage of the operation over the gradual or tenting method. To perform rapid dilatation it is necessary to see the operation done, there are so many important details in connection with it. The patient should be profoundly under ether. The instruments which give the best satisfaction are Sims' glove-stick dilator and the Ellinger-Goodell serrated dilator. These instruments can be thoroughly boiled and otherwise prepared before using. The vagina is washed out with soap and warm water, and then irrigated with 1–1000 sublimate. The operation can be combined with that of incision to any degree the operator determines upon. My experience has led me to think that the combination is a good method, better probably than simple dilatation as practised by Goodell. I have now performed the combined dilatation and incision operation so often, and under varied conditions of the pelvic organs, without having had an interruption in recovery, that I feel convinced the operation should have absolutely no mortality.

This short report is not intended as an essay upon dilatation of the cervix uteri, but as a warning and protest against the use of the dangerous tent. Before closing, however, I must not forget also to protest against the half-hearted sort of tampering with steel dilators, so often adopted in office practice, before making uterine applications of caustics. This practice is most iniquitous, and more cases of pelvic inflammation have followed it than has been credited with. The vagina in such cases cannot be properly cleansed, the uterine tissues are resisting without anæsthesia, and any lacerations made are direct inlets of infection to the lymph spaces and vessels. Put your patient thoroughly under ether, conduct the procedure as you would a laparotomy, and avoid tampering with patients' lives to suit a little personal convenience on your part.

THE INFLUENCE OF THE NERVOUS SYSTEM ON CELL LIFE (METABOLISM).*

By T. Wesley Mills, M.A., M.D., L.R.C.P., Lond.,
Professor of Physiology, McGill University.

In a paper entitled "A Physiological Basis for an Improved Cardiac Pathology," read in abstract in August, 1887, before the Canada Medical Association, I endeavored to show the relation of the cardiac nerves to the nutrition of the heart; but the subject grew as I proceeded with its study, so that I perceived that the theory I applied to the heart was equally true of the other organs and tissues. In that paper, which was published in the *New York Medical Record* of October 22nd, 1887, I advanced a large number of facts derived from common experience, physiological experiment, pathology, and clinical medicine, in favor of what I termed a theory of *constant neuro-trophic influence.*

Briefly, this theory was to the effect that in mammals, if not also in some lower groups of vertebrates, the nutritive processes are all under a *constant* regulative influence by the nervous system, in the sense that they are so dependent upon this influence that they do not, and would not, go on without it. It was also pointed out that function was not a thing totally distinct and alone regulated by the nervous system, but that function was only one *phase* of a general metabolism, and was no more under the influence of the nervous centres than the other less recognized phases.

A year's additional study of the subject has convinced me more than ever of the necessity of widening our views of the relation of the various organic processes, so that instead of terming the theory, I would offer for your consideration one setting forth a constant neuro-trophic influence, I would replace it by the expression *constant neuro-metabolic influence*, as it implies a wider and truer conception of the subject, as I view it; and I am not sure but that it would be well to abandon the term "nutrition" altogether, or, if not, certainly to define it afresh.

* Read before the section in Physiology of the Congress of American Physicians and Surgeons, at its first annual meeting, September, 1888.

The following, then, is a brief presentation of the subject in a form largely free from technicalities.

This subject is of the utmost importance, and has not received the attention hitherto in works on physiology to which we believe it is entitled. We may first mention a number of facts on which to base conclusions:—

(1) Section of the nerves of bones is said to be followed by a diminution of their constituents, indicating an alteration in their metabolism.

(2) Section of the nerves supplying a cock's comb interferes with the growth of that appendage.

(3) Section of the spermatic nerve is followed by degeneration of the testicle.

(4) After injury to a nerve, or its centre in the brain or spinal cord, certain affections of the skin may appear in regions corresponding to the distribution of that nerve, thus, *herpes zoster* is an eruption that follows frequently the distribution of the intercostal nerve.

(5) When the motor cells of the anterior horn of the spinal cord, or certain cells in the pons, medulla, or crus cerebri, are disordered, there is a form of muscular atrophy which has been termed "active," inasmuch as the muscle does not waste merely, but the dwindling is accompanied by proliferation of the muscle nuclei.

(6) In *acute decubitus*, bed-sores form within a few hours or days of the appearance of the cerebral or spinal lesion, and this with every precaution to prevent pressure or the other conditions that favor the formation of such sores.

(7) After section of both vagi, death results after a period varying in time, as do also the symptoms, with the animal.

In some animals pneumonia seems to account for death, since it is found that if this disease be prevented, life may at all events be greatly prolonged.

The pneumonia has been attributed to paralyses of the muscles of the larynx, together with loss of sensibility of the larynx, trachea, bronchi, and the lungs, so that the glottis is not closed during deglutition, and the food finding its way into the lungs

has excited the disease by irritation. The possibility of vaso-motor changes is not to be overlooked. In birds, death may be subsequent to pneumonia or to inanition from paralysis of the œsophagus, food not being swallowed. It is noticed that in these creatures there is fatty (and sometimes other) degeneration of the *heart*, liver, stomach and muscles.

(8) Section of the trigeminus nerve within the skull has led to disease of the corresponding eye. This operation renders the whole eye insensible, so that the presence of offending bodies is not recognized, and it has been both asserted and denied that protection of the eye from such irritation prevents the destructive inflammation.

With the loss of sensibility there is also vaso-motor paralysis; the intra-ocular tension is diminished, and the relations of the nutritive lymph to the ocular tissues is altered. But all disturbances of the eye, in which there are vaso-motor alterations, are not followed by degenerative changes.

(9) Degeneration of the salivary glands follows section of their nerves.

(10) After suture of long-divided nerves, indolent ulcers have been known to heal with great rapidity.

This last fact especially calls for explanation. It will be observed, when one comes to examine nearly all such instances as those referred to above, that they are complex. Undoubtedly, in such a case as the trigeminus or the vagi, many factors contribute to the destructive issue, but the fact that many symptoms and lesions are concomitants does not of itself negative the view that there may be lesions directly dependent on the absence of the functional influence of nerve fibres over the metabolism.

We prefer, however, to discuss the subject on a broader basis, and to found opinions on a wider survey of the facts of physiology.

After a little time (a few hours), when the nerves of the submaxillary gland have been divided, a flow of saliva begins, and is continuous till the secreting cells become altered in a way visible by the microscope.

Now, we have learned that protoplasm can discharge all its functions in the lowest forms of animals and in plants, independently of nerves altogether.

What, then, is the explanation of this so-called "paralytic secretion" of saliva? The evidence that the various functions of the body, as a whole, are discharged as individual acts, or series of acts, correlated to other functions has been abundantly shown; and looking at the matter closely, it must seem unreasonable to suppose that this would be the case if there was not a close supervision by the nervous system over even the details of the processes. We should ask that the contrary be proved rather than that the burthen of proof should rest on the other side. Let us assume that such is the case; that the entire behavior of every cell of the body is directly or indirectly controlled by the nervous system in the higher animals, especially mammals, and ask, What facts, if any, are opposed to such a view?

We must suppose that a secretory cell is one that has been, in the course of evolution, specialized for this end. Whatever may have been the case with protoplasm in its unspecialized form, it has been shown that gland cells can secrete independently of blood supply, when the nerves going to the gland are stimulated. Now, if these cells have learned, in the course of evolution, to secrete, then, in order that they shall remain natural—not degenerate—they must, of necessity, secrete, which means that they must be the subject of a series of metabolic processes, the final of which only is expulsion of formed products. Too much attention was at one time directed to the latter. It was forgotten, or, rather, perhaps, unknown, that the so-called "secretion" was only the last of a long series of acts of the cell. True, when the cells are left to themselves, when no influences reach them from the stimulating nervous centres, their metabolism does not at once cease. As we view it, they *revert* to an original ancestral state when they performed their work, lived their peculiar individual life as less specialized forms, wholly or partially independent of a nervous system. But such divorced cells fail; they do not produce normal saliva: their molecular condition goes wrong at once, and this is soon followed by departures visible by means of the microscope. But just as secretion is usually accompanied by excess of blood, so most functional conditions, if not all, demand an unusual supply of pabulum. This

is, however, no more a cause of the functional condition than food is a cause of a man's working. It may hamper if not digested and assimilated.

It becomes, then, apparent that the essential for metabolism is a vital connection with the dominant nervous system.

It has been objected that the nervous system has a metabolism of its own, independent of other regulative influence, but in this objection it seems to be forgotten that the nervous system is itself made up of parts which are related as higher and lower, or, at all events, which intercommunicate and energize one another.

We have learned that one muscle cell has power to rouse another to activity, when an impulse has reached it from a nervous centre.

Doubtless this phenomenon has many parallels in the body, and explains how remotely a nervous centre may exert its power. It enables one to understand, to some extent, many of those wonderful co-ordinations (obscure in detail) which are constantly taking place in the body.

We think the facts, as they accumulate, will more and more show, as has been already urged, that the influence of blood pressure on the metabolic (nutritive) processes has been much over-estimated. They are not essential, but concomitant in the highest animals.

Turning to the case of muscle, we find that when a skeletal muscle is tetanized, the essential chemical and electrical phenomena are to be regarded as changes differing in degree only from those of the so-called resting state.

There is more oxygen used, more carbonic anhydride excreted, etc. The change in form seems to be the least important from a physiological point of view. Now, while all this can go on in the absence of blood, or even of oxygen, it cannot take place without nerve influence or something simulating it.

Cut the nerve of a muscle, and it undergoes fatty degeneration and atrophy. True, this may be deferred, but not indefinitely, by the use of electricity, acting somewhat like a nerve itself, and inducing the approximately normal series of metabolic changes. If, then, the condition when not in contraction (rest)

differs from the latter in all the essential metabolic changes in rate or degree only, and if the functional condition or accelerated metabolism is dependent on nerve influence, it seems reasonable to believe that in the resting condition the latter is not withheld.

Certain forms of paralysis (*e.g.*, hysterical) are not followed by atrophy. Why? Because in this form the metabolic nerve influence is still exerted.

The recent investigations on the heart make such views as we are urging clearer still. It is known that section of the vagi leads to degeneration of the cardiac structure. We now know that this nerve contains fibres which have a diverse action on the metabolism of the heart, and that according as the one or the other set is stimulated, so does the electrical condition vary; and everywhere, so far as known, a difference in electrical condition seems to be associated with a difference in metabolism, which may be one of degree only, perhaps, in many instances, still a difference. The facts, as brought to light by experimental stimulation, harmonize with the facts of degeneration by the cardiac tissue on section of the vagi; but this is only clear on the view we are now presenting that the action of the nervous system is not only universal, but that it is *constant;* that function is not an isolated and independent condition of an organ or tissue, but a part of a long series of metabolic changes. It is true that one or more of such changes may be arrested just as all of them may go on at a less rate, thus, actual outpouring of pancreatic secretion is not constant; but secretion is not summed up in discharge merely, and on the other hand it would seem that in some animals the granules of the digestive glands are being renewed while they are being used up in secreting cells. The processes may be simultaneous or successive. Nor do we wish to imply that the nervous system merely holds in check, or, in a very general sense, co-ordinates processes that go on unoriginated by it. We think the facts warrant the view that they are in the highest mammals, either directly (most) or indirectly originated by it; that they would not take place in the absence of this constant nervous influence.

The facts of common observation, as well as the facts of disease, point in the strongest way to such a conclusion.

Every one has experienced the influence on, not one, but many functions of the body, we might say the entire metabolism of depressing or exalting emotions. The failure of appetite, loss of flesh and mental power under the influence of grief or worry, tell a plain story. Such broad facts are of infinitely more value in settling such a question as that now discussed than any *single* experiment.

The best test of any theory is the extent to which it will explain the whole round of facts. Take another instance of the influence over metabolism of the nervous system.

Every athlete knows that he may overstrain, *i.e*, he may use his muscles so much as to disturb the balance of his powers somewhere, very frequently his digestion, but often there seems to be a general break—the whole metabolism of the body seems to be out of gear. If we assume a constant nervous influence over the metabolic processes, this is comprehensible. The centres can produce so much only of what we may call nervous force, using the term in the sense of directive power, and if this be unduly diverted to the muscles, other parts must suffer. The same holds of excessive mental application.

On this view, also, the value of rest or change of occupation becomes clear. The nervous centres are not without some resemblance to a battery; at most the latter can generate only a definite quantity of electricity, and if a portion of this be diverted along one conductor, less must remain to pass by any other.

It is of practical importance to recognize that, under great excitement, unusual discharges from a nerve centre may lead to unwonted functional activity; thus, under the stimulus of the occasion, a man may in a boat-race originate muscular contractions he could not by the strongest efforts of his will cause under other circumstances. Such are always dangerous. We might speak of a reserve or residual nerve force, the expenditure of which results in serious disability. It also applies to mental and emotional effects, as well as muscular, and seems to us to throw light upon many of the failures and successes (so-called) in life.

It seems that our past views of secretion and nutrition have been partial rather than erroneous in themselves, and it is a

question whether it would not be well to substitute some other terms for them, or, at least, to recognize them more clearly as phases of a universal metabolism. We appear to be warranted in making a wider generalization.

To regard processes concerned in building up a tissue as apart from those that are recognized as constituting its function seems to be illogical and unwise, with the knowledge we at present possess.

Whether, in the course of evolution, certain nerves, or, as seems more likely, certain nerve fibres in the body of nerve trunks have become the medium of impulses that are restricted to regulating certain phases of metabolism, as, *e.g.*, expulsion of formed products in gland cells, is not, from a general point of view, improbable, and is a fitting subject for further investigation. But it will be seen that we should regard all nerves as "trophic," in the wider sense. What is most needed, apparently, is a more just estimation of the relative parts played by blood and blood-pressure, and the direct influence of the nervous system on the life-work of the cell.

These views are greatly strengthened by the facts well known to every observer of disease in the human subject. The preponderating development of the cerebrum in man must be taken into account in the working of every organ. To have a normal stomach, liver, kidneys, etc., is not enough; for real health, all the parts of that great complex of organs we call the brain must not only work, but work in concert. We must regard the nervous centres as the source of ceaseless impulses that operate upon all parts originating and controlling the entire metabolism, of which what we term functions are but certain phases, parts of a whole, but essential for the health or normal condition of the tissues. Against such a view we no facts, either of the healthy or disordered organism.

RETRO-PHARYNGEAL ABSCESS.

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(*Read before the Medico-Chirurgical Society of Montreal.*)

Abscess in the retro-pharyngeal cellular tissue is of comparatively infrequent occurrence. From its position it is very apt to give rise to the most alarming symptoms. Partly from the fact that the greater number of these cases occur in young infants, in whom the pharynx is often difficult to inspect, and partly that, owing to their infrequency, the practitioner is off his guard, the number of reported cases in which the true state of affairs has escaped recognition, till almost too late, is numerous. If they serve no other purpose than as reminders, the following notes may be of some interest:—

Case I.—Alice H., aged ten months, inmate of the St. Margaret's Nursery, a poorly-nourished, anæmic infant, bottle-fed since two months old, had been under treatment for the previous six weeks, suffering from digestive disorders and from a succession of small furunculæ appearing in various parts of the body, especially about the scalp. On March 17 she had a convulsion, for which the usual remedies were employed. At my visit the following day a careful examination was made, without detecting much at fault. The nares were blocked up with a catarrhal discharge; there was a slight cough and frequent sneezing, with a temperature of 102°F. I supposed the symptoms to indicate the onset of an attack of pertussis, of which we had already several cases in the building. The infant remained somewhat feverish and very restless for the following six days, without change in the general symptoms, but evidently failing in nutrition. On the 25th I was informed that it had refused its food, being apparently unable to swallow. Its cry was faint; there was considerable retraction of the epigastrium and lower ribs on inspiration. A few large râles were heard at both bases, but insufficient to account for the retraction. There was slight enlargement of the cervical glands, especially on the right side. The temperature was 101°. On inspection of the throat I found the pharyngeal

mucous membrane pressed forward, redder than usual, and quite filling the upper part of the pharynx. On examination with my finger, a firm, elastic swelling was detected, whose margin I was unable to define accurately, but which did not seem to extend far down. As the symptoms were urgent, a carefully-guarded bistoury was at once passed in, and vent given to a small quantity of purulent matter by a vertical slit. For the few following days I made gentle pressure with my finger from below upward, and endeavored, as West* suggests, to press out any remaining pus. The infant was put on cod-liver oil and iron wine, and, as far as the abscess was concerned, made a good recovery.

For the notes of the following case I am indebted to Dr. Geo. Ross :

Case II.—A. M., aged eight months, on 24th of December, 1887, having been apparently up till this time in perfect health, was seized with a violent convulsion. On examination, no cause for the convulsion was obtained. The infant passed a restless night, notwithstanding the administration of laxatives and bromide, and when seen next day was found crying, evidently in pain. There was slight fever, but he nursed and drank freely. For five or six days there was little alteration in the symptoms. The fever remained ; the infant got little sleep, and was evidently sick, but the diagnosis remained obscure. At the end of that time he rather suddenly developed a difficulty in swallowing, and shortly afterwards refused his food altogether. While lying back he made a gurgling sound like a person gargling. The throat was inspected, but nothing abnormal was detected ; only a quantity of frothy salivary fluid was seen on the fauces. A consultation with Dr. Blackader was arranged for ; but, on arriving next morning, we were informed that, a few hours previously, the baby had regurgitated with violence through mouth and nares a considerable quantity of pus. On examination, pus was seen welling up freely from the pharynx into the mouth, and some of it escaping through the nostrils. There was immediate relief to all the symptoms, and the child soon appeared quite well. Ten days afterwards some enlarged glands were detected on the side of

* Diseases of Infancy and Childhood, sixth edition, London, 1874, p. 601.

the neck. These went on to suppuration and were opened by Dr. Shepherd, with antiseptic precautions. They soon healed, and a complete recovery at once followed.

For the following notes I am indebted to Dr. Shepherd:

CASE III.—A. R., aged nine months, female, had been noticed for a week previous to swallow with difficulty and cough considerably after doing so. There had been decided pyrexia. On examination, a large fluctuating tumor was found protruding from behind the pharynx into the throat. Fluctuation was also readily made out behind the sterno-mastoid on the left side, where a distinct swelling could be seen. Considering the size of the tumor, it was deemed wiser to open it externally, after Hilton's method.* A small incision was made through skin and fascia, behind the middle of the left sterno-mastoid muscle. A director was then thrust in towards the pharynx, and a quantity of creamy pus oozed out. A pair of dressing forceps was then introduced (closed) through the opening, and, when in the sac, opened, and withdrawn open. Several ounces of pus were evacuated. Drainage was secured. No caries of the vertebræ was detected. The sinus discharged a good deal of thin, watery pus for some weeks.

Dr. Geo. Major has kindly furnished me with the facts of the following cases. One occurred in a child of four years as a sequel of measles; the difficulty of breathing and swallowing was very great, but was immediately relieved on incision and evacuation of the pus. A similar case occurred after cerebro-spinal meningitis. A third case was in an infant under a year old; the abscess was supposed to be the result of an ordinary influenza. And a fourth case occurred in an infant of six months secondary to a tonsillitis; immediate relief was given on the evacuation of a considerable amount of pus.

Formerly the view was entertained that abscess in the pharynx was nearly always symptomatic of spinal caries. This view has now been quite abandoned, as statistics show that the great majority of all the cases are idiopathic and occur in infancy. Among the more recent contributions to our knowledge of this affection perhaps the most valuable have been those of Bokai,† who, in

* "Rest and Pain," Am. edition, New York, 1879, pp. 76.

† "Ueber Retropharyngeal Abscess bei Kindern," Jahrb. fur Kinderheilkunde, Wien, 1857, 1876, und 1881 (durch Alexy).

his two papers, has given us the statistics of 204 cases, which were observed at the Children's Hospital at Pesth, between the years 1854–80, in a total attendance during that period of nearly 150,000 patients. Of these 204 cases, 189 were of the idiopathic form, 7 were secondary to caries of the vertebræ, 7 were secondary to burrowing of pus from abscesses in the neck, and 1 was traumatic. The great majority of these cases occurred under two years; 196 out of the 204 occurred under three years. In 97 cases collected by Gautier* nearly one-third of the patients were infants under one year, and Henoch says almost all his cases affected children who were in the first year of life or very little older.† Cases arising from caries, tonsillitis, traumatism, and pus burrowing from other situations in the neck, are liable to occur at all ages. In his first paper, Bokai referred the idiopathic form of these abscesses to a phlegmonous inflammation of the connective tissue, but later investigations have indicated a dependence on a lymphadenitis, and Bokai advocates this view in his last paper. Dr. J. O. Roe, in a very exhaustive paper (to which I am indebted for many of my facts) read before the Laryngological Society at its annual meeting in 1884, also urges this view, but Dr. Lefferts,‡ in replying to the paper, regards idiopathic form of abscess "as probably due to a simple phlegmonous inflammation of the cellular tissue arising from causes which produce similar abscesses elsewhere." Henoch§ thinks that the assumption that they start primarily in the lymphatic glands situated in front of the vertebræ is not by any means positively determined: and Baginsky says, "While we can with Bokai distinguish idiopathic abscess from that secondary to suppuration elsewhere, we would agree with Kormann that inflammation arising primarily in the glands is very rare, and that both the chronic swellings of the glandular tissue and the acute abscess-forming lymphadenitis are not really idiopathic, but are the result of morbid processes occurring in either the mucous or serous membranes of one of the cranial cavities."‖

Chronic rhinitis and inflammation of the mucous membrane in

* "Des Abcès Retropharyngiens," Genève et Basle, 1870.
† "Diseases of Children," Am. ed., 1882, pp. 59.
‡ Trans. Laryngol. Soc., 1884. § Loc. cit.
‖ Lehrbuch der Kinderkrankheiten, Dr. Adolf Baginsky, 1887.

the neighborhood of the fauces appear to act as exciting causes, and there can be little doubt that those constitutional states which predispose to inflammation of the lymphatic glands in general have an important influence. Of these the scrofulous diathesis is by far the most important. Hereditary syphilis has been noted only in a few cases. A certain percentage of cases have been recorded as occurring after scarlet fever, measles, and other specific fevers. In such cases prolonged or severe inflammatory conditions of the nasal mucous membrane appear to favor the occurrence of abscess. Dr. Lewandowsky, in an interesting paper,* gives the history of two cases occurring after scarlet fever. In the first case, the infant, a year old, was taken ill with what was apparently a not very severe type of the disease, although two other children in the house had died of the malignant form. There was early severe inflammation about the posterior nares, but the fauces did not suffer severely. Convalescence was slow and variable. In the fourth week from the onset, without any special symptoms, a fluctuating swelling was noticed to the left of the median line of the pharynx. An incision was made into it, and about half an ounce of thin, purulent matter escaped. This was followed by rapid recovery. The second case was that of an infant of seven months. The catarrhal symptoms in the fauces were slight, but there was a copious mucopurulent discharge from the nares. Convalescence proceeded slowly, when, on the tenth day, a peculiar snorting respiration came on. On examining the fauces a swelling was seen, which fluctuated on pressure. An incision was made into it, and pus escaped. The infant soon recovered completely. The author remarks on these cases that they were on one side only. They ran a subacute course, and presented none of the symptoms of suffocation or dysphagia, which occur in more acute cases. On this account they were liable to be overlooked. The frequency of the occurrence of such cases appears to be variable, for Dr. Schmitz did not find one case in 450 cases of scarlet fever in the St. Petersburg Children's Hospital, while Dr. Bokai gives seven cases out of 644 cases in the Children's Hospital in Pesth. Vio-

* Berliner Klin. Wochenschr., No. 8, February 20, 1882.

lent phlegmons of the throat appear rarely to give rise to this form of abscess, but suppuration in the tympanic cavity in children is pointed out by Wiel* as a not infrequent cause. Dr. Roe, quoting him, reports the case of a child, nine months old, that died from secondary œdema of the larynx. On post-mortem, suppuration in the ear was shown to have been the cause of the abscess. This same cause is referred to by several other writers.

The great majority of the cases of retro-pharyngeal abscess occur during the winter and spring months, probably because in those seasons catarrhal affections of the nose, pharynx and middle ear are most common.†

The abundance of glandulæ in this situation has long been recognized, but to Dr. Edmund Simon‡ we are indebted for our exact knowledge of the lymphatics of this region. He describes them as forming small networks on either side, which terminate in glands located one on each side of the median line, between the superior constrictor and the aponeurosis of the prevertebral muscles. After the third year of life these glands are said to disappear altogether,—a fact which, if corroborated, would indicate a close connection between the time of activity of these glands and the period when abscess is most liable.

Kormann, quoted by Eustace Smith, states that with his finger he has been able to detect enlargement of these glands in inflammatory affections of the pharynx and nares, and Bokai, in his statistics, adds that, in addition to the above quoted cases of abscess, he noticed sixty-three cases of lymphadenitis that did not terminate in suppuration.

The symptoms which should attract our attention are dysphagia, or inability to swallow, dyspnœa, cough, alteration of the voice, with, in most cases, more or less stiffness of the neck. This latter in infants frequently escapes notice. If the abscess has been allowed to attain any size, some fulness behind the angle of the jaw may be detected. The symptoms will vary a good deal with the position of the abscess. If principally in the upper part, deglutition will be mainly interfered with; if it ex-

* Monatschrift f. Ohrenheilkunde, Berlin, 1881, Bd. xv. s. 43.

† Baginsky, Lehrbuch der Kinderkrankheiten, s. 622, Braunschweig, 87.

‡ Schmidt's Jahrb., Bd. cvii, s. 161.

tends lower, respiration will more or less suffer; while, if it be still lower, becoming post-œsophageal rather than post-pharyngeal, there may be little or no alteration in either, and the diagnosis will be very obscure. The dyspnœa is generally worse when the infant is in the recumbent position. Dr. L. M. Politzer* of Vienna says that a strongly-marked nasal or palate sound in an infant's or child's voice should always lead us to suspect and examine the pharynx for abscess; and Duparcque† states that in those cases where the abscess is seated so low down that it cannot be seen or felt, the voice assumes a shrill tone, and pressure made on the larynx or trachea produces severe pain, and sometimes entire suspension of respiration. Dr. Goix adds that the normal lateral gliding movement which the posterior edges of the thyroid have on the vertebral column is lost in retro-pharyngeal abscess, but may persist when the abscess occupies the retro-laryngeal space.‡

The amount of pain, pyrexia, and general disturbance depends somewhat on the course, whether acute or chronic, which the disease assumes. In the more acute cases the onset is sudden, and is frequently marked by vomiting or convulsions; the pain is severe; the fever is sometimes of a high grade, and the symptoms above referred to are pronounced. In those that run a more chronic course the onset is often insidious, the general disturbance much less, and the local symptoms are less urgent. A somewhat remarkable instance of this insidious and chronic course is related by Dr. Eustace Smith,§ where a child of three years was brought to the hospital for difficulty of breathing. The infant, when one year old, had suffered from enlarged glands in the neck, which went on to suppuration. Shortly afterwards the child's breathing had become oppressed, and respiration had been accompanied by a peculiar whistling noise, always worse at night. It had remained in this condition ever since. On examination, a swelling was seen at the back of the pharynx, which was punctured, and thick pus escaped. The child was promptly relieved.

* Am. Journal of Obstetrics, vol. xvii, p. 553.
† Annales d'Obstétrique, December, 1842, p. 242.
‡ Archiv. Gén. de Méd., October, 1882.
§ "Diseases of Children," New York.

Among the curiosities of the literature on the subject is the case quoted by Dr. J. Lewis Smith of an infant who died at the age of nine weeks, with the history of always having had much difficulty in nursing and swallowing. On post-mortem an abscess, with thick and firm walls, was found in the retro-pharyngeal tissues.

But the notable fact with which one is impressed on reviewing the literature is the frequency with which these cases remain undiagnosed, or receive a faulty diagnosis, sometimes till spontaneous rupture takes place, or death ensues either by inanition or suffocation. A few cases are reported where the abscess was not discovered till after the children had ceased breathing, but on opening it immediately, and employing artificial respiration, they recovered. The symptoms may resemble, and be mistaken for, those of catarrhal laryngitis, membranous croup, œdema of the glottis, and perhaps tonsillitis or a foreign body in the larynx. In all cases where the symptoms are suspicious, a careful inspection should be made in a good light, and followed by careful but gentle palpation. The index finger should be passed first to the back of the pharynx, then up behind the soft palate to the naso-pharynx, and afterwards down as far as possible behind the larynx. None of these manœuvres are always easily managed in infants with narrow buccal and pharyngeal cavities. Mucus and regurgitated milk are liable to prevent thorough inspection, and the movements of the finger in the pharynx may give rise to severe attacks of suffocation, and, as Fleming has remarked, even to convulsions. Yet it is our only resource, and the attempt should be renewed. In such cases there can be little objection to quieting the child with a few whiffs of chloroform, or, preferably, a mixture of ether and chloroform.

The tumor, if seen early, is hemispherical or oval, and is generally situated a little to one side of the median line, and fluctuation in it can easily be made out. If desired, it may be opened while the infant is under the anæsthetic, provided due precautions are taken to prevent the entrance of pus into the larynx.

In regard to treatment there is but one correct course, and that is early incision. If this is postponed, pressure symptoms are liable to become serious at any moment, or should the abscess

burst spontaneously, death by suffocation is liable to occur, especially if the rupture takes place during sleep. Henoch* mentions a case in which a colleague desired to keep the child until the following day for demonstration, but paid for the delay by the death of the child by suffocation in this way during the night. Similar cases are reported by different writers. Perhaps the safest way of opening the abscess in children is to draw off the greater amount first by aspiration, then afterwards to relieve the remainder by a vertical incision. Others recommended the use of a large trocar and canula. Excepting, however, those cases where the abscess is very large, or low down, out of convenient reach. a well-guarded bistoury, in the absence of a pharyngotome, passed in along the edge of the finger, answers the purpose, but care should be taken to bend the head of the child quickly forward, so that the pus may run out of the mouth. The bistoury must be guarded to near the tip. Schmitz,† quoted by Roe, tells us of a case he attempted to open with a bistoury, when the tongue of the child slipped from under his finger and was severely cut. Copious hemorrhage ensued, and the life of the child was endangered.

If there is any tendency to pointing externally, Chiene's or, more properly, Hilton's proposition to open it externally should be adopted; and there is no better method than that adopted by Dr. Shepherd in my third case. When the opening has been made in the pharynx, West's suggestion to make pressure daily with the finger to evacuate any pocket of the pus is a good one. The child's diet had better be confined to milk entirely, while appropriate remedies are given for the general constitutional condition.

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* Loc, cit.

† Jahrb. f. Kinderheilkunde, Leipzig, 1872, 1873.

Retrospect Department.

QUARTERLY RETROSPECT OF SURGERY.

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

The Rational After-treatment of Surgical Cases.—This is the title of a most interesting paper which appears in the forty-fifth volume of *Guy's Hospital Reports* (1888) by C. H. Golding-Bird. Many surgeons give particular directions as to when and how to operate, but say very little about the after-treatment. Mr. Bird looks at the subject from the medical side, and says that however "pure" or special a surgeon may be, unless he is to be regarded as a mere operating machine, this side of the question must be studied. In speaking of spinal caries he says that when the patient is long since as well as he can ever be he often persists in wearing some spinal appliance, hoping thereby to better himself. The author holds it is kindest and wisest to tell such a patient to put aside his artificial aids and to face at once the "struggle for existence," and cease to buoy himself up with false hopes of further improvement. No doubt specialists (mechanical specialists in particular) are most to blame for this state of things. Continual tinkering with a case which never can be further improved tends to keep up a condition of invalidism and dependence on others which is very demoralizing to the patient. In the treatment of *lateral spinal curvature* the author has had a certain measure of success, but he considers this due to the throwing of the work of cure on the patient herself than by letting her imagine she was a passive item in the process; he knows no cure for this disease of which the major part is not the patient's own effort. Once let the Rubicon of hopeful *curative* treatment be passed, "and then, instead of consigning the case to the limbo of incurables, it may by scientific treatment be made to face its new condition of life and again take its place in the world with more or less activity." In the chronic after-treatment no rule can be laid down definitely; each case must be studied by itself.

After an operation the patient may have collapse with cold surface, which delays recovery; this is often due to the anæsthetic not having been properly administered: it has been given too slowly whereby the patient gets saturated, or not continuously enough, so that the shock of the operation is physiologically appreciated though not consciously felt. Here the administration of alcohol by mouth and rectum is advisable, and also hot packing. In such cases vomiting may be expected; idiosyncrasy has as much to do with this as with sea-sickness. To prevent sickness after operations Mr. Golding-Bird is in the habit of giving a half to one pint of warm water, or salt and water, to make the patient sick outright, and then to give immediately half a small biscuit or any solid at hand. This method he says rarely fails.

Anodynes are too frequently given after operation to allay pain; position, support, relief from pressure, should be tried first in all suitable cases. When anodynes are necessary, none are worth considering beside opium, though he has learnt to fear it in severe collapse, as after nephrectomy; here alcohol freely used is better. He prefers solid opium to morphine, and objects to the hypodermic use of the latter after operation; the immediate effect is agreeable, but transient, and its frequent repetition rapidly develops a craving for it. The patient becomes the slave of the syringe, and the administrator soon becomes the slave of the patient. When pain is not the cause of insomnia after operations, simple soporifics should be given. In these cases the surface of the body is often bloodless and chilled, and the cavities engorged with blood; the state of brain anæmia necessary to sleep is absent. In such cases the hot pack with blankets should be used till patient sweats, aid cutaneous vascular dilatation by alcohol or Dover's powder, and as soon as the skin moistens the feeling of restless misery disappears. Again, the patient may sleep in the early part of the night, but wakes in the early morning restless and uneasy. Such a condition is seen in exhausted and aged patients, and the cause is frequently an empty stomach. A hungry man cannot sleep. In such cases a very little solid food suffices; half a biscuit will determine blood to the stomach and produce a feeling of comfort, just enough to turn the balance

in favor of sleep. Our author prefers oatmeal biscuits, because the more we can worry the mucous membrane of the stomach the more likely patient is to sleep. The supposed soporific effects of lettuce, as Lauder Brunton remarks, are due probably less to the lactacin than to the indigestible cellulose the man puts into his stomach at supper time. In cases, then, of morning restlessness give food, not drugs. In the old, if not given by the mouth it should be given by the rectum, and a renewal of hot bottles and blankets must be seen to, for temperature and pulse at this time are alike low, and for this reason, in the aged and exhausted, the early morning hour should be most dreaded. This explains why, as morning breaks, many cease to exist; life may be saved in some instances by proper treatment. Chloral is to be preferred as a soporific. Bromide of potassium depresses the patient and upsets the bowels. In an insomnic patient, the belief that a soporific is being given often induces sleep, hence the usefulness of pure water subcutaneously and the administration of the good old bread pill.

Rectal feeding is most valuable in after-treatment; it is far better to give the meal already peptonized. The following formula is recommended: Beef-tea, ℥i; yolk of an egg; liq. pancreat., ʒi; wine, ℥ss; warm milk to ℥iii, with a pinch of bicarbonate of soda. Drugs are added if required, or the wine is omitted. The enema should not exceed three fluid ounces, and must be given with a three-ounce ball syringe fitted with a four-inch gum-elastic nozzle, and be injected at one squeeze, without any admixture of air, the patient's buttocks being slightly raised. Firm pressure must be maintained on the anus for a minute after the withdrawal of the syringe. In this way the author has fed patients every four hours for days together without the slightest rectal irritation.

After a severe operation the patient can be most influenced through the skin. In collapse the skin is cold and bloodless, there is passive congestion of the viscera, and feeble heart's action. Knowing this, the treatment of this grave condition is indicated. Hot pack with blankets and bottles to the chin, do not even allow a hand out; when once cutaneous circulation is

established the patient is comfortable. In chloroform vomiting, when the skin is cold, this method is a valuable one. In speaking of peritonitis, Mr. Golding-Bird says patients do not die from the height of the fever. The case dies with cold extremities, passively suffused face, and a generally anæmic condition of the surface of the body. The patient vomits incessantly, and goes out like the snuff of a candle. It is very much like a death from exposure. The whole of the blood can be accommodated in the portal system. After perforation of the bowels, the condition is much like that of internal hemorrhage. The pulse is small, rapid, weak, the patient sighs and gasps for breath, struggles or craves for drink. He is really *bleeding to death into his portal area.*

After *abdominal operations* the author relieves the congested peritoneum. No ice or cooled drinks; nothing by the mouth. Enema above-mentioned, with opium and port-wine every three or four hours. The wine allays the craving for fluids at once; the opium allays peristalsis and pain, and assists the skin to act. Hot packing till sweating occurs, a pillow under the thighs, but not a hand above the bedclothes. The moment reaction sets in sleep will be obtained. This treatment should be adopted after all hernia operations.

In conclusion, the author states that the influence of the environment upon the patient is too often disregarded for the more easy and empirical administratian of drugs, whilst rational influences lie ready to hand unnoticed.

Arthrectomy.—At a meeting of the Royal Medical and Chirurgical Society of London, held November 13th, 1888, Mr. Edward Owen read a paper on the above subject. He advised arthrectomy especially in cases of pulpy or chronic synovitis of the knee-joint, provided the bones were not implicated and that the patient was not the subject of general tuberculosis or of albuminoid degeneration. It had an advantage over excision, viz., that it took away from the articular surfaces only such tissues as were diseased.

In the discussion which ensued Mr. Bryant stated that he had performed similar operations as far back as 1866.

Mr. R. Parker thought, in young children, that arthrectomy was the preferable operation, and the cases best suited were those that had neither bone disease nor sinuses. He did not advise the removal of the crucial ligaments.

Mr. Owen said in reply that he found it impossible to thoroughly clean the back of the knee-joint unless the crucial ligaments were divided; their destruction was not of much moment, as a fixed joint, not a movable one, was desired.

Mr. Herbert Page has an elaborate article in the *Lancet* of Nov. 17, 1888, entitled *Arthrectomy* v. *Excision of the Knee*, in which he strongly advocates early operation and removal of the diseased structures by the knife or scissors. In arthrectomy nothing is sacrificed but the diseased structures, and the growing limb can be preserved in its natural length. In cases where arthrectomy has been performed there is improvement in the general health as soon as the diseased structures have been removed. In many early cases, where the disease is limited, a movable joint may be obtained, but the author is inclined to think that good, firm ankylosis is the thing for which we ought to strive; and it is therefore unnecessary to be particular about saving bits of the crucial ligaments which may prove to be healthy and to resuture the ligamentum patellæ. At best the operation is a long one, and the saving of time is of some moment to the patient. Mr. Page exposes the joint by the old horse-shoe incision, which curves below the patella.

Mr. G. A. Wright (*Lancet*, Dec. 1, 1888) claims that the operation of excision or arthrectomy has been in use in the Children's Hospital, Pendlebury, since 1881, and cases were published in the *Lancet* of that year. He thinks the operation more applicable to the knee joint, though he has performed it in the elbow and ankle. In the knee joint he advocates the trans-patellar method, and drains through the back of the joint. The results in successful cases, Mr. Wright says, are better than in those of excision; there is no shortening either immediate or as growth goes on, while the results in other respects are like those of excision, for a firm, stiff, straight limb is obtained. The operation is applicable to those cases of disease that resist treatment

by rest, but are not so far gone as to require amputation, in fact the majority of cases which are now excised. The operation is chiefly applicable to children. He confesses to many failures in cases where excision was afterwards necessary, but the patient has never suffered from the double operation.

The following points are to be noticed: (1) Full exposure of every cranny in the joint. (2) Absolutely complete removal of all disease, scraping out any doubtful bony spots. (3) The crucial ligaments should be preserved if possible, as they tend to steady the joint afterwards. (4) The limb should be well fixed until healing is complete, then the patient may get about on crutches and a patten in Thomas' knee-splint, or with the limb fixed in plaster-of-Paris. (5) As in excision, flexion will occur unless the limb is kept fixed for from two to three years at least. (6) In some cases actual lengthening of the limb occurs after the operation, just as overgrowth not uncommonly follows necrosis from acute periostitis. Mr. Wright, since his series of 16 cases published in 1885, has had nine operations on the knee and one on the elbow; out of these five have done well and three are yet incomplete.

Arthrectomy of Knee-joint in Children.—Dr. Mandry (Tübingen) says that resection of the knee-joint is now almost universally acknowledged an unjustifiable operation; he advocates extirpation of the capsule and scraping out of any tuberculous foci. Incision is made over and through the patella or tendon of the quadriceps; all diseased structures are removed, but no healthy cartilage or bone substance. The joint is irrigated with sublimate solution and the wound in soft parts and patella sutured with catgut. Watson's splint is applied, and finally plaster-of-Paris bandage. The results in seven cases were: in one, almost normal mobility of the joint; in five, ankylosis; and in another case the disease returned and excision had to be performed. The author has collected 63 cases operated on by Volkmann, König and others, and an analysis of these and his own brings him to the following conclusions: In 27 per cent. the operation was unsuccessful on account of recurrence of the disease, necessitating resection or amputation; 63 per cent. were cured, and

in three cases elongation of the diseased extremity resulted. Slight degree of flexion is noticed in 53 per cent. Hoffa some years ago said that shortening of the limb was not greater after resection than after conservative treatment provided the epiphysis of the femur was not interfered with. Mandry is of opinion that arthrectomy gives better results; on the other hand, he acknowledges that after arthrectomy there exists a greater tendency to flexions. Of the 44 cases which did well after operation, eight recovered with movable joints.—(Quoted in *Annals of Surgery*, Dec., 1888, from *Beitrage zur Klin. Chirurgie, Klinik zur Tübingen*, Bd. iii, Hft. 2.)

There is no doubt that for many cases of knee-joint disease in children arthrectomy is the proper operation. It is less severe than excision, and, if successful, the patient recovers with a limb which is of the same length as its fellow; if it should fail, then excision may still be performed with benefit. The difficult questions to decide are, when to operate? and, how long should the treatment by rest be practised before arthrectomy is determined on? The many failures which follow arthrectomy are due to the surgeon not having completely removed the diseased tissue, and any one who has performed this operation will understand the great difficulty of knowing when all disease is removed. The disease is certain to recur if any diseased structures are left. Excision, whilst a more radical operation, necessitates the removal of much healthy tissue along with the diseased, and, besides, shortening necessarily results. The method of excision introduced by Dr. Fenwick of Montreal, and practised by Kocher of Berne, whilst it leaves intact the epiphysial line and so does not interfere with future growth, preserves the length of the limb at the time, many of the cases recovering with a shortening of half an inch. Dr. Fenwick's method* is to round off the end of the femur and to make a slight concavity in the upper end of the tibia for the femur to fit into; only a thin slice of bone is removed with a fine fretwork saw. In this way the position of the limb is maintained with but slight loss of bone.

* See Ashurst's International Encyclopædia of Surgery, vol. iv.

Primary Union after Excision of Tubercular Hip Joints.—At the meeting of the Royal Medical and Chirurgical Society of London, held December 11th, 1888, two papers were read on Primary Union after excision of Tubercular Hip Joints, by Mr. Barker and Mr. Bilton Pollard. (*Lancet*, Dec. 15th, 1888.) Mr. Barker stated that his conclusions were as follows: (1) That scrofulous, or, in other words, tubercular joint disease was a local expression of infection of the tissues with the bacillus tuberculosis, and ran, as a rule, a course beginning in hyperplasia and ending in fatty degeneration. (2) That at a certain stage of the disease the complete removal of the infected tissues ought to be possible. (3) That if complete removal of the tubercular tissue from the hip be accomplished, the resulting wound ought to heal in many instances by first intention throughout, as in the case of the knee, and often even without any necessity of drainage. The author then described a case which was operated on some months before. The patient was a boy, aged five years, who had been under treatment for hip disease for a year; this had resulted in necrosis of the head of the femur and abscess. The child was operated on, primary union resulted, and patient left hospital on the fourteenth day wearing a double Thomas' splint, which was removed on the eighth week after operation. The child began then to run about, and has been quite well ever since. The case was exhibited.

Mr. Pollard drew attention to the fact that the wounds necessary for extirpation of tubercle from joints would heal as rapidly and as permanently as other wounds of a similar size if essential conditions were secured. (1) The whole of the tubercular growths must be removed. (2) Perfect asepsis must be assured. (3) Bleeding must be checked and the wound made as dry as possible. (4) Oozing must be restrained by the even elastic support of a wool dressing and a moderately tight bandage. (5) Absolute rest of the part must be maintained during the process of healing. Four cases of hip joint disease operated on by the author were referred to; three were operated on by the anterior incision and one by a curved incision round the upper and posterior part of the trochanter. No drainage was employed.

The dressings were removed on the seventh day and the wounds found completely healed. In one case where there was perforation of the acetabulum the disease recurred, the others recovered well, and were exhibited at the meeting.

In the discussion which followed the reading of the paper nearly all the surgeons condemned early excision; treatment by rest and extension was advocated, and the results were stated to be better. Early excision was apt to be followed by recurrence of the disease or a badly developed limb. Mr. Croft looked upon this form of treatment with healing by first intention as marking a new epoch in surgery. Mr. Wright of Manchester stated that he had 800 cases of hip-joint disease under his care during the last few years, and had performed excision 130 to 140 times; he preferred section of the bone through the trochanter rather than above it. It was necessary, after excision, to keep the joint at rest with a Thomas' splint for six months or a year. Mr. Hulke said it was interesting to hear that synovial membrane could be thoroughly removed by scraping through the small anterior incision, especially as in arthrectomy of the knee-joint a large incision was necessary to thoroughly clear away the diseased tissues. The anterior incision was first introduced years ago by Hueter of Greifswald.

Early excision of the hip-joint with union by first intention is apparently a revelation to London surgeons, although it has been practised for years by Volkmann of Halle and Macewen of Glasgow. The latter's success in these cases is marvellous, and cure in one dressing is the rule. I saw many of his cases in 1887, and was amazed at the rapid recovery; children six weeks after excision could go about and flex and extend the excised hip as well as the healthy one. Macewen's work on the surgery of joints appears to be as little known in London as were his operations on the brain and spinal cord, until his epoch-making paper of last year was read at the meeting of the British Medical Association.

The after condition of cases which have been the subject of early operation is important, and no certain information is published on this point. Are the limbs of these children after, say,

ten years as serviceable as when the treatment by rest and extension has been practised? Volkmann is not so enthusiastic now as he was some years ago about early excision of the hip. The after-results of his cases were not as satisfactory as regards the condition of the limb as could be wished. The early operation, and, in fact, every operation for excision of the hip-joint is better performed by the anterior incision introduced by Hueter in 1878. It commences in front of the thigh half an inch below the anterior superior spine of the ilium and runs downwards and a little inwards for three inches. The incision goes down between the tensor fasciæ and rectus femoris muscle, and no muscular fibres need to be divided. When the joint is reached the neck of the femur is sawn across, the diseased head lifted out, and the remaining diseased tissue gouged out with a strong spoon. The wound should be thoroughly irrigated and not sutured until all bleeding has ceased. According to Dr. Barker (*Brit. Med. Jour.*, Jan. 14th, 1889) this method of treatment has many advantages. The operation is free from danger, the limb is but little shortened, and the cure is attained in as many weeks as it previously required months. Mr. Barker claims great credit for advising flushing of joints during and after operation with hot water, and thinks this has not been used before. The practice is not a new one, and is one which would naturally occur to most surgeons. It has been frequently made use of in the Montreal General Hospital and many other hospitals. His flushing gouge is no doubt an original idea, but, as far as I can see, possesses no special advantages. This gouge is hollow, and has attached to its handle the rubber tube of the irrigator, so that the cutting edge of the gouge receives the full force of the water-stream rushing through the handle. The technique of the operation described by Mr. Barker is that which has been followed by German and American surgeons for several years past.

Partial Resection of Symphysis Pubis in Operations on the Bladder.—Dr. Helferich, at the seventeenth congress of German surgeons, held last April, read a paper on the above subject. (*Beilage zum Centralblatt für Chirurgie*, 1888, No. 24.) He has removed a portion of the symphysis pubis in three cases in

order to more readily reach the bladder. In one case the condition necessitating the operation was tuberculous caries of the symphysis itself; in the others it was carcinoma of the bladder and great enlargement of the middle lobe of the prostate. He makes a transverse incision and pushes back the soft parts; after reaching the bone he divides it on either side, pespendicularly, to the necessary depth with a broad sharp chisel, and then placing the chisel horizontally at the required level, and beginning at one of the perpendicular lines, he divides the symphysis from before backwards, carrying the chisel from each end of the exposed line to the centre. In the case of carcinoma, free access was obtained to the tumor which was in the upper aspect of the posterior wall. The tumor was removed and the healthy tissue on both sides. The bladder wound was sutured with catgut. There was considerable stranguary for a few days, but it gradually diminished and healing was complete in three weeks. The case of prostatic enlargement died in eight days after operation, but the case was an unfavorable one. The operation is an easy one, and is suitable for cases of large malignant tumors, some forms of prostatic hypertrophy, excessively large stones and encysted stones, rupture of the bladder, etc.

Dr. P. Niehans of Berne (*Centralblatt f. Chirurgie*, No. 29, 1888) describes a new operation for exposing the bladder somewhat similar to that of Helferich. He makes a vertical incision through the soft parts in the linea alba till the root of the penis is reached, and then the incision is directed to the part in which it is intended to remove the bone, reaching down in the direction of the rami of the pubis and ischium; the soft tissues are pulled aside, the periosteum carefully elevated, the ascending ramus of the ischium is divided with a chisel, then a small incision is made in the horizontal ramus of the pubic bone immediately to the inner side of the crural vein, and the attached pectineus and periosteum removed; then the ramus is carefully divided with a chisel, the symphysis is divided with a knife or chisel, and after separating the soft parts the piece of bone is turned down and the bladder is exposed to view. Several excellent illustrations explain the method of operating. Dr. Niehans has only

operated on one case so far—a woman, aged 38, with a fœcal fistula over Poupart's ligament. There was also fæces and pus in the urine. The patient was much reduced. The osteoplastic operation above described was performed; a fistulous opening into the bladder large enough to admit a finger and a tuberculous ulceration were found. The opening was excised and sutured, the bone replaced and fixed in position by catgut sutures through the symphysis. The patient recovered well from the operation, and although the replaced bone gave way, and had to be kept in place by a girdle, and fæces still came through the wound, the patient remained in good condition. The author states that the further course of the case is yet to be reported, but the fact is proved that the operation is feasible, easy of performance, and without danger.

Statistics of Operations on the Gall-bladder.—Dr. A. Depage, in the course of a paper on surgical intervention in biliary lithiasis (*Jour de Med. Brux*, 1888, No. 24), says that up to the present time there have been 78 cholecystotomies performed. Of these, 6 were done according to the method of Spencer Wells and 72 with suture of the gall-bladder to the abdominal wall. Of the first named series, 3 died from acute peritonitis, 1 cured case was followed by recurrence, and 2 cases were completely cured. In the second series there were 11 deaths, 5 from hemorrhage and collapse, 2 from biliary retention, 2 from effusion of bile into the peritoneum, and 2 from undetermined cause; there were also 4 deaths from secondary complications. Amongst the cures were 24 cases of biliary fistula, some permanent. The number of cholecystectomies has been 22, with 2 deaths from obstruction of the bile ducts and 1 after recovery from the operation from causes independent of the biliary lithiasis. Thus in cholecystotomy with suture of the gall-bladder and its return free into the abdominal cavity a mortality of 50 per cent. resulted; in cholecystotomy with suture of the bladder to the parietes 15.27 per cent.; and in cholecystectomy 9.99 per cent. And as the last-named figure comprises two cases of permanent occlusion of the common bile duct, the result, if they be excluded, is greatly to enhance the position of cholecystectomy as an operation to be preferred to cholecystotomy.—(Quoted in *Lancet*, Jan. 12, 1889.)

A Contribution to the Surgery of the Spine.—Dr. Robt. Abbé (*New York Medical Record*, Feb. 9th, 1889) reports two cases of operation upon the spine. The first is a case of *extra-dural tumor of the spine*, with complete paraplegia. Patient, aged 22, was in perfect health up to January of last year, when pain in the back first appeared. In March there was some fullness and tenderness on pressure in the soft parts to the right of the ninth and tenth dorsal spines. Four weeks later swelling of the soft parts had markedly increased, and tactile sensibility began to be disturbed in both legs, then there was failure of muscular power. Two weeks later he could not stand without support, then power in the legs rapidly disappeared. The spine became rigid and painful, the abdomen tender and hyperæsthetic, and the legs absolutely anæsthetic. By May 25th the condition had become serious. There was considerable hectic fever and the patient lay in an apathetic condition, suffering from the slightest motion of the spine and with girdle and intercostal pains unabated, so operation was decided upon. An incision was made six inches long close to the spines, from sixth to twelfth dorsal. The laminæ being uncovered, some thick broken-down tissue and pus were scraped away; the laminæ were already bare of periosteum, and the spines and laminæ of the eighth, ninth and tenth were cut away by forceps. This revealed a dense mass of tissue and desiccated pus occupying the entire calibre of the canal, and extending up and down in all two and a half inches. This compressed the cord firmly against the anterior wall. It was thoroughly and rapidly removed by a sharp Volkmann's spoon until sound bleeding tissue was left on every side. The cord was not seen to pulsate. The cavity was packed with iodoform gauze, and an antiseptic dressing and plaster-of-Paris bandage applied. On the eighth day sensation began to return. In the fourth week he began to move his left leg and toes of his right. In four weeks he moved both legs well. In four and a half weeks he walked pushing a chair. When the patient was exhibited to the Surgical Society of New York eight months after operation he was stout and healthy, and walked well. The tumor was examined for tubercle bacilli, but none found.

The second case was that of a man aged 24, who was suffering from a most intractable brachial neuralgia. The nerves were stretched, then the arm was amputated, without benefit, so finally the roots of the 6th, 7th and 8th cervical nerves were divided, with improvement in the symptoms. At first the nerve roots were cut outside the dura mater, but the day after operation, no relief being experienced, the patient was again operated on; the dura mater was slit up and explored, and the posterior roots of the 6th, 7th and 8th nerves were cut inside the dura mater. The dura mater was sutured, and the wound, which had at the first operation been packed with iodoform gauze, was now closed with sutures and united by first intention. He was much improved by the last operation, could walk steadily, and had less pain.

Removal of a Spoon from the Peritoneal Cavity.—This remarkable case has been of late exciting some interest in Paris. M. Le Dentu brought it before the meeting of the Academy of Medicine on January 8th. The patient, a young man aged 21, swallowed, unintentionally, a wooden spoon about twelve inches long; after swallowing it he dined as usual, and went to bed feeling perfectly well. About two in the morning he suffered severe pains and a sense of tearing in the region of the stomach. He went to hospital, and the house surgeons felt distinctly the foreign body above the umbilicus. Next day Le Dentu performed gastrotomy. On opening the stomach and introducing his finger no foreign body was found; the abdominal cavity was then searched and the spoon was found standing upright in the pelvis, one of its ends being in contact with the bladder. The spoon was removed and the man made an excellent recovery. The most careful examination could not detect the part of the stomach through which the spoon had passed.

Pneumotomy for Pulmonary Abscess.—In the *Vratch*, No. 38, 1888, p. 143, Prof. F. N. Opensovsky of Dorpat relates a strikingly successful case of pneumotomy for an enormous abscess of the right lung, with gangrene, in a man aged 30. The patient had enjoyed excellent health up to the middle of April, 1886, when, in consequence of exposure, he caught severe pleuro-

pneumonia, which ended in suppuration. Three weeks after the onset of the illness he expectorated a tumblerful of offensive pus. The suppuration steadily progressed, being accompanied by violent cough, hectic fever, and emaciation. About the middle of September signs of pulmonary gangrene appeared. Prof. W. Koch performed pneumotomy on Sept. 19th. Two pieces of the 5th and 7th ribs were excised between the anterior and posterior axillary lines. The pleura having been found firmly adherent, a thermo-cautery was plunged into the pulmonary tissue, striking the abscess cavity at a depth of two to three centimetres; this was followed by cough and the expulsion of a large amount of fœtid pus. The cavity was large enough to allow Prof. Opensovsky to introduce his whole hand freely and move it about searching for the bronchial opening. Having removed several pieces of sloughing tissue, the operator enlarged the bronchus with the thermo-cautery and then freely cauterized the whole gangrenous focus, afterwards washing the cavity out with a weak solution of permanganate of potash. A drainage-tube was inserted and dressings applied. Irrigations were repeated twice daily for the first ten days, and afterwards once a day; the drainage-tube was removed Oct. 26th. On Dec. 8th patient was discharged well. A year after the man was perfectly well, and no fistula remained. He was gaining his living as a hospital porter.

The Application of Extension in Potts' Disease and Vertebral Injuries.—Dr. H. C. Wood recently, at the University Hospital of Philadelphia, showed and explained a method of treatment applicable to cases of Potts' disease and fractures of the spinal column which he believed to be novel. (*Medical News*, Jan. 19th, 1889.) After speaking of Prof. J. K. Mitchell's treatment of these cases many years ago by swinging from the head, and alluding to the treatment by the plaster jacket, Dr. Wood said that it had occurred to him that the spinal jacket might be used for purposes of extension. The chest of a well-shaped man is an inverted cone, and any upward strain upon the jacket would be received, not upon any one point, but upon numerous points on the surfaces of the wall. He therefore had

a jacket made with loops from which the patient could be suspended. The making of the loops is very simple; after the first layer of the jacket is put on, a strong linen bandage is placed at the lateral lower edge anteriorly, and then carried directly up, loosely, over the shoulders and down again to a similar position on the posterior edge of the jacket. The bandage is then reversed and carried upward and forward, and returned until three or four turns of the bandage are loose over the shoulders; the same is done on the other side, and then the exterior layers of the jacket are put around the two bandages up to the top of the jacket. When the jacket is dry, the loops are so thoroughly incorporated with the jacket that they cannot be removed without destroying the jacket, and they afford a means of extension. Cases of Potts' disease are advised to be daily suspended for three or four hours, wholly or partially as the case requires. This method is also suggested in the treatment of fractures of the spine, not only could the patient be suspended for hours, but by securing the loops to the head of the bed and raising the latter at an angle the weight of the body could be used for purposes of extension even during sleep.

On the Removal by Operation of Naso-Pharyngeal Tumors.—Mr. Annandale has an interesting paper on the removal of naso-pharyngeal tumors in the *Lancet* of January 26th, 1889. The successful removal of these tumors has always been a matter of great difficulty, and many operations have been devised. The method introduced by Mr. Annandale, although not altogether original, is new in many respects, and as performed by Mr. Annandale in the very skillful manner which I witnessed in Philadelphia last September is a very brilliant operation. His method of operation is as follows: (1) The exposure of the anterior nares by freely dividing the mucous membrane connecting the upper lip and upper jaws according to the plan of Rougé. (2) The division of the bony septum of the nose along its attachment to the jaw. (3) Incising the soft parts along the middle line of the hard palate, and then sawing through the alveolar margin of the upper jaw and through the entire hard-palate along the same line. The soft-palate may or may not require

division in its middle line. The necessity for this depends upon the size and attachments of the growth. (4) The forcible separation of the two jaws and the introduction through the gap of the finger, periosteal scraper, or other similar instrument with the view of separating the secondary connections of the growth to the surrounding parts. (5) The removal of the growth from its primary site and origin by forceps, sharp spoon, cold snare, or galvanic wire. In all the author's own cases he used strong forceps, assisted by a periosteal elevator and sharp spoon. (6) When the tumor has been removed, the introduction of some form of antiseptic plug, such as a plug of lint soaked in carbolic acid and well dusted with iodoform. (7) The jaws are now brought together again and secured by one wire suture through the alveolar margin of the bone and two or more horse-hair sutures through the soft parts of the palate wound.

The advantages of this operation are the absence of resulting deformity and the freedom from hemorrhage.

Three successful cases are narrated, two in young men and one in a boy aged 14. In the case performed at Jefferson Hospital, in Philadelphia, preliminary tracheotomy had to be performed as the patient was unable to respire properly whilst lying on his back. In cases where the growth is very extensive, excision of one or both upper jaws is recommended.

Treatment of Intussusception of the large Bowel by Abdominal Section.—Mr. Arthur Barker (*Lancet*, August 4th, 1888) reports a case of intussusception successfully treated by abdominal section. The patient was a child aged four years, admitted into University Hospital August 25th, 1887. He had been in good health up to the day before admission, and his bowels had been opened at 10 A.M. About three o'clock next morning the child awoke and complained of great pain in the abdomen. He passed a stool which was loose, but there was no relief of pain; then he passed, a little later, about a wine-glassful of blood, and half an hour later some more. He was seen by Mr. Barker at 2 P.M. A tumor could be felt in left iliac fossa, and the finger in the rectum reached nothing abnormal, but returned covered with blood. The rectum and colon were then distended with water

to as large an extent as appeared safe, and this seemed to get rid of the tumor. At 7 P.M., great pain still continued, blood still was passed, and the tumor had returned. Operation was at once decided on. The intussusception was found without difficulty in the left hypochondrium. The abdominal incision was enlarged and the intussusception reduced. The bowel was much congested, and marked by submucous hemorrhages. The portion of the bowel involved in the tumor consisted of the cæcum, ascending and transverse colon. The patient made an uninterrupted recovery, and was discharged on September 16th. Appended to this paper is a table of 73 cases treated by laparotomy. In 34 of these the bowel was released; 12 recovered, 22 died, and 9 cases were found to be irreducible. In 5 the abdomen was closed without doing anything, and all died. The intussusception was resected in 14 cases, and only 1 (an adult) recovered. In 10 cases an artificial anus was made, and all died. In 10 cases an artificial anus was made without laparotomy, and all died; so that of these 73 cases only 13 recovered.

In the Hospital Mirror of *Lancet* for January 26th, 1889, Dr. Cheadle reports a case of intussusception in a child aged 14 months treated successfully by inflation of air by means of an ordinary Higginson's syringe. The patient was first placed under chloroform; on examination, a well-defined, sausage-shaped tumor could be felt on the left side of the abdomen, extending from the hypochondrium to the iliac fossa. Air was inflated until the abdomen became tolerably tense; after waiting a minute or so the air was allowed to escape. After the third inflation no tumor could be felt in any part of the abdomen. In a week the patient was perfectly well. Dr. Cheadle states that this is the fifth case of intussusception successfully treated by inflation at the Children's Hospital. Four cases are reported in the *Lancet* of October 1886 and February 1888.

Mr. Carver (*Lancet*, Jan. 26th, 1889) reports a case of intussusception in a child aged 2 years and 5 months successfully treated at the Addenbrooke Hospital, Cambridge, by abdominal section. The affection had been of seven weeks' duration. The bowel protruded at the anus. The abdomen was opened and

reduction effected without any great difficulty. There was no evidence of general peritonitis.

Surgery of the Intestines.—The literature on this subject still continues to accumulate. I have space only to refer the reader interested in this subject to the following articles :—

(1) An excellent paper on " Perforation of the Vermiform Appendix in its relation with Attacks of Perityphlitis," by John A. Macdougall of Glasgow, *Lancet*, Sept. 22nd and 29th, '88.

(2) "Clinical Lecture on Typhlitis, its Nature and Treatment," by Sir Dyce Duckworth, in *Lancet*, Oct. 6th, 1888.

(3) A paper by Dr. Wm. T. Bull of New York, read before the Medical Society of London, on " The Surgical Management of Typhlitis and Perityphlitis," *Lancet*, Nov. 10th, 1888.

(4) " Special Diagnosis in Acute Perforative Peritonitis," by Dr. H. W. G. Mackenzie, *Lancet*, Dec. 1st and 8th, 1888.

(5) " Perityphlitis," editorial in *New York Medical Journal*, Jan. 5th, 1889.

(6) " Relapsing Typhlitis healed by Operation," by F. Treves, *Lancet*, Feb. 18th, 1888.

(7) " Notes of a case of Abscess in the Groin containing a Vermiform Appendix," by W. D. Spanton, *Brit. Med. Journal*, Jan. 19th, 1889.

(8) " A case of Perforation of the Vermiform Appendix, General Peritonitis, Laparotomy, Accident, and Recovery," by Dr. A. M. Jacobus, *New York Medical Record*, Feb. 2, 1889.

(9) " The Surgical Treatment of Perforating Ulceration of the Stomach and Intestine," by Dr. Steinthal, in *Beilage zum Centralblatt f. Chirurgie*, No. 24, 1888, quoted in *Annals of Surgery*, p. 61, Jan. 1889.

(10) " Three cases of Intestinal Obstruction due to Meckel's Diverticulcum," by Dr. G. Gibson Hamilton, *Lancet*, October 6th, 1888.

(11) " Abdominal Section for Acute Intestinal Obstruction, with Recovery," by Mr. Edmund Owen, *Lancet*, Oct. 20, 1888, pp. 765 and 771.

(12) " Two cases of Suppurative Peritonitis treated by Laparotomy, Iodoform Gauze, and Capillary Siphon Drainage," by Mr. C. B. Keetley, *Lancet*, Nov. 24, 1888, p. 1021.

(13) "Three cases of Excision of the Ileo-cæcal Valve for Carcinoma," by Kuester of Berlin. Report of meeting of Berlin Medical Society, Nov. 21, 1888, in *La Semaine Médicale*, Nov. 28, 1888.

(14) "On the Treatment of so-called Perityphlitic Abscesses," by Dr. R. F. Weir. Paper read before the Medical Society of the State of New York, and reported in *New York Medical Journal*, Feb. 16, 1889.

Very Hot Compresses in Surgical Practice.—Prof. J. J. Nasiloff, writing in *Vratch*, gives an account of several cases of inflammation of the lymphatic glands which he treated with marked success by means of very hot compresses. These compresses consisted of a four-fold piece of linen, rather larger than the surface of the affected glands. This was dipped into water at a temperature nearly or quite equal to 212°F., wrung out, and applied quickly over the glands, its own temperature then being 140° to 160°F. These applications were made morning and evening, the compress being allowed to remain on, covered over with cotton wool, for about fifteen minutes. The application produced somewhat severe pain, but this did not last long, though sometimes a blister was caused. The treatment was continued about a fortnight. It was found that it very soon began to promote absorption; this action was always accompanied by a rise of temperature, depending apparently upon the size of the diseased glands and upon the extent of the absorption that was taking place. It was noticed that the earlier the treatment was adopted the more effective it was. Professor Nasiloff believes that hot compresses are a valuable form of treatment, not only in strumous glands, but in rheumatic osteo-myelitis, and in fungoid inflammation of the joints.—(*Lancet*, Dec. 1, 1888.)

Reviews and Notices of Books.

Questions and Answers on the Essentials of Obstetrics. By W. E. ASHTON, M.D. Philadelphia: W. B. Saunders. 1888. Montreal: C. F. Dawson, 233 St. St. James Street.

This little book is one of the Saunders' quiz-compends now in course of publication, "intended to assist students to put together the knowledge they have already acquired by attending lectures." It is arranged in the form of questions and answers, and, as far as it goes, is well done. It is perhaps the least objectionable quiz-compend on obstetrics yet published, and if used by industrious students for review purposes only may be of real service. The great danger of such books, however, is that the idle and lazy may be tempted to study nothing else, and may with their aid cram up sufficient to pass an ordinary examination without possessing any real serviceable knowledge of the subject.

The Skin Diseases of Infancy and Early Life. By C. M. CAMPBELL, M.D., C.M. London: Ballière, Tindall & Cox. 1889.

This little work, which, by the way, is brought out in the interests of one who gets much attention from book-makers now-a-days, viz., the 'busy practitioner,' is a pleasantly-written synopsis of diseases of the skin. A short but good description is given of all the skin diseases of early life, and those features which entitle them to a separate consideration are dwelt upon. The eruptive fevers are described shortly, and erysipelas, strange to say, is included amongst them. Why a book on skin disease should describe certain febrile diseases which are accompanied by an eruption and not others it would be difficult to say. Why are scarlet fever and measles always described and not typhoid and typhus? The busy practitioner would be ill-advised indeed if he depended on treatises on diseases of the skin for information on eruptive fevers; still dermatologists continue to give a short account of them in every treatise on skin diseases. The most important skin disease of infancy and childhood is, without

doubt, eczema, yet this is but superficially treated in this work. The chapter on "Parasites, Animal and Vegetable," is short and to the point. The last chapter, on "Therapeutic Agents," contains a number of valuable recipes, which, no doubt, will be appreciated by the 'busy practitioner.' On the whole, this book is well suited for handy reference, and contains much information that is recent. It would be greatly improved if there was a good index attached, the only index being that of the authorities referred to. The book is beautifully printed on good paper, and is singularly free from typographical errors.

A Treatise on Headache and Neuralgia Including Spinal Irritation and a Disquisition on Normal and Morbid Sleep. By J. LEONARD CORNING, M.A., M.D., Consultant in Nervous Diseases to St. Francis Hospital, etc., etc. Illustrated. Price, $2.75. New York: E. B. Treat, 771 Broadway, 1888.

In this work the author, after a few preliminary remarks on the mechanism of head pains, proceeds to discuss the nature, symptoms and treatment of anæmic headache. He lays great stress on the diagnostic importance of feeble pulsation in the carotids in this form of headache. He maintains that there will also be found, if properly looked for, a lowering of the surface temperature of the head. The importance of the latter statement should have had the support of the facts that led the author to make it.

In the treatment, mention is made of the use of the nitrate of amyl, the nitrite being evidently meant. Alcohol is spoken of as the most reliable agent in anæmic headache. This we believe to be a very unnecessary and a very unsafe mode of dealing with these cases.

The author highly recommends his method of compressing (electro-compression) the carotid arteries in cases of so-called congestive headache.

Separate chapters are devoted to the consideration of nervous, toxic and sympathetic headaches and those due to gross organic lessions of the brain and its coverings. In the

treatment of neuralgia, but limit it and if the most important part of the treatment—the general treatment—while a great deal of space is taken up with local medication, for this and for the author's views in spinal irritation we must refer the reader to the work itself.

Therapeutics: its Principles and Practice. By H. C. Wood, M.D., LL.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania. A work on Medical Agencies, Drugs and Poisons, with especial reference to the Relations between Physiology and Clinical Medicine. The seventh edition of a Treatise on Therapeutics, rearranged, rewritten, and enlarged. Philadelphia: J. B. Lippincott Co.

The seventh edition of this truly great work is, in many respects, a marked improvement on previous issues. The first part, containing one hundred pages, is devoted to the consideration of remedial methods other than drugs. Massage, metallo-therapy, dietetics, heat, cold and electricity are shortly, clearly and forcibly described. We have also excellent chapters on the treatment of general bodily conditions, including exhaustion, obesity and the gouty diathesis.

In the classification of drugs, the author adopts a new system which, while it presents some advantages over other methods, is not free from fault. In classifying such agents as Indian hemp, belladonna, hyoscyamus, stramonium and cocaine under the heading of delirifacients, nothing is gained, while much is lost. None of the above-named drugs are ever used in the treatment of disease to induce delirium. Delirium is an untoward and an undesirable action. In our opinion, the closer a classification holds to the pharmacology (in medical doses) and therapeutics of an agent, the more useful is it.

We need hardly mention that the pharmacology of all agents, both old and recent, are carefully and well described. This could hardly be otherwise when the author is well known as one of the greatest of living pharmacologists. Prof. Wood is, how-

ever, in addition, a great physician, and his extensive knowledge and experience shows itself continually.

The volume closes with the usual appendix so common in recent works on therapeutics—the Therapeutic Index. Such aids to the treatment of disease are of questionable utility.

Favorite Prescriptions of Distinguished Practitioners, with Notes on Treatment. By B. W. PALMER, A.M., M.D. New York: E. B. Treat, 771 Broadway, 1888.

This work is simply a compilation of prescriptions, and will no doubt be found useful for those practitioners who are either unable or too lazy to think for themselves.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, November 30th, 1888.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

A New Adenomatome.—DR. GEO. MAJOR exhibited a new form of adenomatome recently devised by him.

DR. POTTS was elected a member of the Society.

Arsenical Pigmentation.—DR. LAPTHORN SMITH exhibited a case of chronic arsenical poisoning, resulting from the taking, in all, of less than an ounce of Fowler's solution in doses of five minims three times a day gradually increased to ten minims. As the patient now presented all the symptoms of Addison's disease, the bronzing of the skin being very marked, she might easily be mistaken for such a case if it were not known that she had been taking arsenic. As only one case of arsenical pigmentation had been shown to the Society during several years, the last being by Dr. R. L. MacDonnell, he thought that it might be of interest to any of the members who had not already seen it. The arsenic had been administered for pustular acne, which it had rapidly cured.

Thrombosed Vein from Abscess in right Thigh.—DR. LAFLEUR exhibited the specimen and gave the following history:—The

patient, a man about 30 years of age, had developed a phlebitis in the right thigh during an attack of typhoid fever. During convalescence a swelling was noticed about the middle of the inner side of the right thigh, which gradually increased in size and was accompanied by a rise of temperature. On incising this, a quantity of pus and blood-clot escaped, and with these a tough, greyish cylindrical body six inches long and about six lines in diameter at its thickest end, tapering slightly to the other extremity. A small piece one inch in length, having the same appearance, was also observed. On examination, these were found to be necrosed pieces of a thrombosed vein, probably the internal saphena vein, in the course of which the abscess lay. The original phlebitis had been followed by suppuration about the vein, and the thrombosed portion had become necrosed and had come away with the contents of the abscess.

Abdominal Cancer.—Dr. Lafleur also exhibited specimens from a case of cancer of the stomach, involving the head of the pancreas, with formation of a pancreatic fistula. The new growth was limited to the lower and anterior portion of the wall of the stomach half an inch from the pyloric. In this situation there was a large cancerous ulcer one and a half inches in diameter and one inch in depth, with firm, raised edges and a dirty, greenish-gray sloughy base. On dissecting out the pancreatic duct, which was very tortuous, an opening was found in it on the floor of the ulcer about about two and a half inches from its intestinal end. The pancreas in this situation was very much infiltrated with cancerous material. The liver contained numerous metastatic nodules of a pinkish-gray color, with yellow centres, showing marked umbilication. The glands in the transverse fissure of the liver were enlarged and infiltrated. On slitting up the bile duct no obstruction was found as far as the junction of the right and left hepatic ducts. The gall-bladder was moderately distended with clear bile, which could easily be expressed through the bile papilla. There was extension of the cancerous growth locally both in the peritoneum and in the right pleural sac. Microscopically the growth consisted of an imperfectly-developed tubular structure resembling gastric follicles and lined

with cuboidal and round epithelial cells. Between the imperfect tubules there was also a growth of epithelium with a scanty stroma. An interesting feature in the case was the presence of sugar in the urine for some weeks previous to death.

Excision of the Elbow.—DR. RODDICK presented specimens of diseased bone removed by excision of the elbow-joint. The patient, a farmer, of about 40 years of age, came to hospital with an abscess in front of the elbow-joint, which was opened by the house-surgeon. The first sign of disease was noticed about three months before coming to hospital. When examined by Dr. Roddick the joint was found to be involved and the articular surfaces of the bones diseased. He then decided on excision. The joint was dressed with antiseptic precautions and bone-drains employed. Recovery was rapid and complete.

Foreign Body in the Bladder.—DR. RODDICK exhibited a piece of a black gum-elastic catheter removed from the bladder of an old gentleman by the lithotrite. The fragment was about four inches long, and was brought away complete, although very friable. Dr. R. stated that he was fortunate enough at the second attempt to grasp the fragment almost exactly at one end and it was easily withdrawn.

DR. HINGSTON had removed foreign bodies from the bladder four or five times. Twice a piece of catheter and once a lead pencil in the case of a boy of 12 years. The accident of breaking a catheter in the urethra is always a serious one, and not always easily guarded against when patients catheterize themselves. He related a case where a new bougie had broken and a piece remained in the bladder when used by a physician ; after removal the piece was very friable and coated with phosphates. The lithotrite is the best instrument to use in these cases, especially Bigelow's form, as it affords a good grip and is not so likely to cut the substance of the catheter.

DR. PERRIGO had two cases, one of a broken catheter removed by Dr. Hingston and one case of a hairpin in the bladder of a woman. The latter had been in some time, for when removed it was thickly coated with phosphates.

A Strange Case in Gynæcology.—Dr. Lapthorn Smith related the following case :—

I was sent for early in the morning of the 1st of October to attend Miss T., who, I was informed, was in great pain from inability to pass her water. I found a pale, rather stout, and short girl, a little over 15 years of age, evidently in great suffering, which I speedily, but with some difficulty, relieved by using the catheter. There was profuse leucorrhœa, and on attempting to ascertain the cause of the retention by digital examination I was prevented from doing so by the smallnesss of the opening in the hymen, which I did not feel justified at that time in rupturing. On inquiry I ascertained that she had always enjoyed good health until a few weeks previously, when she came to the city from the country for the purpose of finishing her education, and at which time she had a similar attack of retention of urine. She had menstruated regularly and freely both before and since her arrival in the city, and the flow was accompanied with some pain, but the stoppage of her water on either occasion did not seem to have any connection with her periods. As she was studying more than her health could safely bear, and as she had become very nervous, I advised her to leave off some of her classes and prescribed some nervous sedatives, thinking that the bladder trouble might be merely a sympathetic affection, due to overwork. I heard no more of her until the 12th October, when I was again sent for to draw off her water, of which I took away a large quantity, very pale in color, and with complete relief. Being sent for again eighteen days later I was unable to introduce the soft rubber catheter which I had used before, and was obliged to have recourse to the silver female catheter, which was introduced with great difficulty, and which, though six inches long, barely sufficed to reach to the bladder. The leucorrhœal discharge had now become fœtid and somewhat darker, and I felt convinced that there must be something pushing the bladder up out of the pelvis and pressing on the urethra, and I therefore sent for her mother, whom I intended to come with her daughter to my office for an examination of the latter. By gentle and persistent pressure I succeeded in getting my finger through the

hymen, but further progress was immediately arrested by a tense sac almost solid in consistence which completely filled the lumen of the pelvis, and which barely left room for the finger to be squeezed through between it and the symphysis of the pubis. On making a rectal examination, the finger did not go backwards along the hollow of the sacrum, but was carried forward and to the patient's right towards the symphysis of the pubis. Neither by vaginal, rectal, nor even bimanual examination could the uterus be felt, although by the latter method the tumor could be very distinctly felt projecting at least an inch above the crest of the pubis. By this time the patient had begun to suffer very considerably from constant pressure symptoms on the bowel and bladder, and these, combined with the excessive fœtor of the discharge, which was becoming slightly colored and containing flocculi or grumes, warranted me in thinking the case a serious one and in requesting the opinion of my distinguished elder brethren, Drs. Trenholme and Gardner, which they very kindly granted. Dr. Trenholme agreed with me in finding the pelvis full, but was unable to throw any further light on the question of its nature. He recommended early operation. Dr. Gardner was also good enough to examine her at his office, but deferred his opinion until he should have had an opportunity of examining her under an anæsthetic, for which he requested me to make arrangements at her home. On the afternoon of the 10th Nov. she was anæsthetized with a mixture of two of chloroform and three of ether, not having the one of alcohol which should have been in it, and which I regret to say in my hurry of leaving my home I omitted to add. The digital, vaginal and rectal examinations did not throw much new light on the case, so Dr. Gardner aspirated a small quantity of sanious liquor by plunging a fine needle into the centre of the growth or accumulation. On removing the needle he, without any difficulty, made an opening in the retention wall with his finger, so thin was it at this point, directly opposite the hymen. A lot of friable, cheesy material mixed with blood oozed through, and after a brief consultation I quite concurred in his proceeding to empty the cavity. This was done partly with the finger, and when that was no longer

able to reach high enough, he used a blunt scoop to remove a lot more. There was a good deal of hemorrhage, which was for the moment controlled by a douche of hot water containing a little Condy's fluid. On introducing the finger now it passed through a hard fibrous ring which led into a large cavity from which most of the contents had been scooped out. Stretching across this cavity many fibrous bands or trabeculæ could be felt. The feeling of the hard ring reminded one forcibly of the rigid os of a woman of 40 in labor with her first child and well advanced in the first stage. In order to provide for freer drainage Dr. Gardner incised this ring, and as the bleeding was still rather free the cavity was stuffed with two long strips of iodoform gauze. The patient was put to bed and hypodermic injections of beef-tea were given frequently until she had recovered from the shock, and then a hypodermic of Battley was administered to ease the pain of which she complained. The vomiting was very severe, and never ceased during the next four days. Her pulse, however, gradually returned, and in a couple of days it had come down to 120. Nourishment was given per rectum, and was well retained for several days, after which the bowel rebelled and ejected what was put into it. She passed water freely and painlessly after the operation, and she had several natural motions. On the 12th Dr. Gardner met me again and we removed the iodoform gauze tampon without any return of the bleeding, and a double drainage-tube with a cross-piece in one of them for the purpose of retaining it was introduced into the cavity, which was by this means regularly washed out every four hours with hot water and Condy's fluid. All went well for a couple of days longer, till the 14th November, when the tubes came out and could be re-introduced only a very short distance owing, apparently, to the cavity having either filled up or contracted. On the 11th, 13th and 14th the temperature had been subnormal, 97° to 98°, except on the 12th, when it reached 100° before the tampons were removed, and on the 15th, when it began to rise, reaching 102° on the evening of that day. The fœtor, which had been entirely absent since the operation, then returned, although the free irrigation had been constantly kept up. Early

on the morning of the 15th she began to complain of severe pain at the bottom of the belly, which had all through been flaccid and free from tenderness, but more especially she suffered from a bearing-down pain in the rectum, which she attributed to the pressure of the drainage tubes, which I therefore removed on the evening of the 15th. As the pain continued to increase, and her recovery was decided to be hopeless, I gave her a hypodermic of Battley solution, and repeated it from time to time until her death, which took place early on the 16th November, six and a half days after the operation.

To resume: (1) She had always been remarkably healthy as a child, and the functions of puberty had been established without any apparent disorder. (2) She felt perfectly well until the retention of urine occurring at the middle of September. (3) Shortly after the retention a profuse discharge began containing specks of cheesy matter and which soon became fœtid. (4) Menstruation continued normal in quantity and quality and without pain. (5) The symptoms of pressure on the bladder and rectum became so urgent as to require intervention of a permanent nature. (6) An exploratory aspiration was made to determine the nature of the mass which was found to fill the pelvis, but without any intention at that time of operating for its removal; but on finding the contents semi-liquid we deemed it advisable to avail ourselves of the anæsthesia to empty the sac and drain it. (7) Being an anæmic girl the unavoidable hemorrhage was sufficient to cause collapse, from which she slowly rallied. (8) Peritonitis set in (without pyrexia or swelling of the abdomen) owing to the impossibility of obtaining perfect asepsis. (9) The bowels were moved freely for several days after the operation, and after that the saline treatment was not possible owing to the uncontrollable vomiting, for which were tried ice, iced water, iced champagne, iced soda water, hot water and hot tea, the latter being the first thing which was retained, on the fifth day, when the vomiting ceased, and when she rallied somewhat. (10) The temperature was subnormal all the time, except the third and fifth days, when it rose to 100° and 102° respectively; on the sixth and seventh days it was subnormal again. (11) She passed water freely after the operation.

The above are the facts of the case, and I regret that I am unable to prove the result by a post-mortem examination, which I repeatedly endeavored to obtain, but which the dying girl begged her relatives not to allow, as her last request.

I have called this an obscure case of gynæcology, for the reason that the pathologist of the Society, on his first examining the specimens submitted to me, did not discover any sarcoma cells, so that in their absence the most likely conclusion to which Dr. Gardner and I were at first compelled to come was that we were dealing with a case of double uterus and vagina, one side of which had formed a large retention cyst, the contents of which had become purulent by the admission of air through a small fistulous opening, from which, also, a small quantity of the contents had exuded into the open vagina, thus giving rise to a fœtid discharge. When we felt the fibrous bands stretching across the cavity, and when we saw the free hemorrhage following the breaking up of the contents, we were inclined to think that we were dealing with a sarcoma. Moreover, if it had been a case of retained menstrual fluid, the contents would have been tarry, and not organized; as I believe there is no case on record of retained menstrual fluid ever becoming organized to the slightest extent. On the other hand, this hard fibrous ring reminded one forcibly of the open cervix of the hypertrophied uterus; for in all cases of retention, the continual efforts of the organ to expel these abnormal contents result in a real hypertrophy of its muscular walls. The fact that menstruation had been going on regularly for several months was, of course, against retention, and could only be explained by there being a double uterus, one side of which was closed up and full of menstrual fluid, while the other side fulfilled its functions. The uterus itself could not be felt by any form of examination, so that we were quite in the dark as to whether there was one or two, or whether the contents of this cyst were due to retention or to malignant growth. Against the theory of malignant growth was the fact that she had had no pain in the pelvis or abdomen other than what might be reasonably referred to pressure on the bladder. Against the theory of the tumor being due to disease of either the uterus or ovary

was the fact that the rectum was carried forwards and to the right until it occupied the small place between the tumor and the right symphysis pubis : and the finger in the rectum could feel on either side a band which seemed to be the rectal fold of the peritoneum which had been lifted forward with the rectum by the growth developing behind it.

Just before the meeting, Dr. Lafleur informed me that he had succeeded in finding some large round sarcoma cells, which, of course, has now made the diagnosis clear ; and it is some consolation to know that in view of the very rapid growth which the tumor had made within two or three weeks, that the patient could not have lived in any case more than a few weeks longer. While, on the other hand, the tumor being so firmly wedged into the pelvis, and possibly growing from the posterior part of it, the result of abdominal section would have been instantly fatal. This displacement of the rectum forwards would seem proof positive that the tumor must have grown from the back of it ; but Dr. Gardner, in the case which he will report, and of which he has the specimens, obtained from the post-mortem, proves that the retained menstrual fluid cyst, in developing, had pushed the rectum forwards and to the right in precisely the same way.

Discussion.—Dr. Trenholme said that through the courtesy of Dr. Smith he had seen the case some three weeks before death. The girl at that time was in general good health and free from suffering. On examination, found the left and posterior part of cavity of pelvis to about one-third of its surface occupied with a sessile growth, immovably covered by or bound down to the periosteum or walls of the pelvis. The growth bulged into the cavity and filled nearly half the space ; was of round, uniform contour, except where it seemed constricted about half an inch below the brim of the pelvis by a dense fibrous band. The growth was non-fluctuating and extended from the lower margin of the pubis and ischium to a slight distance above the brim. Per vaginam, found the uterus high up and pressed to the right side, but quite free and movable. Both per vaginam and rectum, could feel the mass as far as the crowning part of the growth ; could not detect fluctuation ; was in doubt as to the exact origin

of the growth, but he wrote Dr. Smith that he regarded it as a myomata, and that it should be removed at once. These facts lead him to wholly dissent from the conclusion reached by the reader of the paper and Dr. Gardner, that it was a growth due to retained menses in a double uterus. There never had been any menstrual trouble, which was hardly compatible with that view. The mobility of the uterus and its entire separation from the tumor, together with its rapid growth and still more rapid changes during the two weeks between his examination and that of his friend Dr. Gardner, utterly preluded the thought of a double uterus and retained menstruation. In fact, the exhibition of the pathological specimens would alone suffice to convince him (Dr. T.) that such was the case. It was much to be regretted that no post-mortem examination was obtainable. Dr. T. would have operated by laparotomy had the case fallen into his hands, as he expected it would have when first consulted. He much regretted being absent from the operation.

Dr. Gardner reported a case which had been sent to him from Brockville, the symptoms of which had a similar onset to the case of Dr. Smith. He emptied the cavity and irrigated thoroughly, and felt sure that he had saved the patient, as she did well until the seventeenth day, when the drainage tubes came out, and, unfortunately, were not replaced for several hours, the result being that her temperature immediately rose, and she died a few days afterwards from peritonitis. He thought at first that this case of Dr. Smith's was one of retained menstruation, but changed his opinion somewhat on perceiving the organized condition of the contents of the cyst, as in the case of his own, to which he had referred, the contents were distinctly tarry. However, on learning from the pathologist that no cancerous cells could be found, he was forced to the conclusion that this was a case of double uterus with retention, and with malignant degeneration of the lining membrane of the organ. The subsequent report of the pathologist stating that round sarcoma cells had been found had, of course, considerably shaken his opinion.

Dr. Lafleur said that he could not accept Dr. Smith's view

of the case as one of double uterus with retention. He regretted that Dr. Smith had accepted as final the evidence of the first examination, which was hasty and necessarily imperfect from the condition of the specimen. The history of the case and the subsequent microscopic examination of the fragments removed pointed conclusively to a rapidly-growing periosteal sarcoma. The specimen showed large round cells embedded in a granular matrix enclosing large and numerous blood-channels. In places the vessels had ruptured, and their contents were mixed with the sarcomatous tissue. A few spicules of bone were detected. Such sarcomas were very prone to soften and degenerate, producing cavities filled with bloodclot and shreds of the new growth. The firmness and resistance of the outer portion of the growth were due to a secondary inflammatory action, which was a frequent concomitant of rapidly-growing tumors.

DR. RODDICK thought it was a sarcoma, and that Dr. Lafleur's explanation was satisfactory. He could not see that there was sufficient evidence to enable one to establish a diagnosis of uterus duplex.

DR. HINGSTON said that as Dr. Trenholme had made out a freely movable uterus displaced upwards at an early examination, and had been able to pass his finger between the uterus and the growth, these observations, together with the forward displacement of the rectum, left no reasonable doubt but that Dr. Smith had to deal with a rapidly-growing tumor arising from the bone behind or partially behind the rectum. He could not see how it was possible for a tumor in front of the rectum to displace it to the right and towards the pubis.

DR RUTTAN said the evidence derived from the nature of the cyst contents was against its being a retained menstrual fluid, Extravasated blood could not be pent up for a prolonged period in such a cavity without its pigment becoming more or less completely changed into methæmogloblin and becoming of a dark or tarry appearance.

DR. SHEPHERD said it was evidently a case of sarcoma and not of uterus duplex.

DR. WILKINS referred to a sarcomatous tumor which had been

sent to Dr. Fenwick, where the tumor contents were exactly similar to the specimens shown to-night by Dr. Lafleur. The tumor was the size of a child's head and of very rapid growth. Such tumors are prone to become highly vascular, and the contents to become friable and give rise to very serious hemorrhages.

Dr. Cameron agreed with the previous speakers as to the nature of the disease, and thought that Dr. Trenholme's observations made before the pelvis became blocked by the rapid growth completely negatived the diagnosis of double uterus.

Dr. Smith, in reply, expressed his regret at not having been able to obtain a post-mortem, although he had made many repeated and strenuous efforts to do so. This would, of course, have cleared up the obscurity. Neither was he allowed to resort to abdominal section during life, as the patient felt convinced that nothing could save her, and she wished to die peacefully. He admitted that Dr. Hingston's point was very well taken, as it had struck him at the time of his first examination that it required something behind the rectum to push it forward. If he had known that there were sarcoma cells in the specimen he would not have so much entertained the theory of the double uterus. He was glad, however, that his paper had elicited such general discussion, and he begged to tender his grateful thanks to Drs. Trenholme and Gardner for their kindness in assisting him with this very serious and difficult case.

Stated Meeting, Dec. 14th, 1888.

Wm. Gardner, M.D., President, in the Chair.

Ovarian Tumor.—Dr. Lafleur exhibited the tumor for Dr. Wm. Gardner. It was multilocular, and contained a large quantity of yellowish, somewhat viscid, fluid which resembled pus. On examination, this was found to be due to extensive fatty degeneration of the cellular elements of the fluid, which were present in great abundance. There was no inflammatory reaction such as would occur in a suppurating cyst. The part of the tumor nearest the pedicle was solid, and on opening the largest cyst was found to be composed of a convex mass of papillary processes, very vascular, and covered with viscid mucus.

In places the papillary projection had undergone fatty degeneration. This was particularly marked in some of the smaller cyst cavities. The surface of the tumor presented two patches, each about one inch in diameter, of a greyish-black color, which appeared to be necrosed. There was nothing to account for this change, as far as could be made out. A small piece clipped from the solid part of the tumor showed branching club-shaped papillæ covered with numerous layers of epithelial cells, the uppermost layer being cylindrical in shape.

Abortion at the Fourth Month.—DR. ALLOWAY exhibited fragments of a fœtus removed from the uterus at the fourth month of gestation. Symptoms of threatened abortion had for some weeks existed. Suddenly the patient had a chill, with rise of temperature, and the operation was performed a few hours afterwards. Under ether the cervix was dilated with Goodell's powerful steel dilator to its full extent (1½ inches), and the contents of the uterus removed in fragments as rapidly as possible and the walls of the uterus curetted. The patient was up about a week afterwards, and has had no more trouble. Dr. Alloway spoke of the fatal error so often committed of allowing the first or initial chill to pass by without interference. He held that the employment of antipyretics was largely responsible for this error which had cost society so many valuable lives, and much after-suffering in those it did not kill. He spoke strongly against the use of sponge tents or other kind of gradual dilatation. The method was not consistent with the attainments of scientific surgery of the present day. It could never be carried out as an aseptic procedure, and it was dangerous. Many case of death have followed the use of tents which should not otherwise have terminated so, and it was not at all uncommon to be followed by severe attacks of pelvic cellulitis and months of anxious invalidism. Dr. Alloway said it was a great mistake to accept the statement of instrument makers that their sponge-tents were aseptically prepared; such statements were as absurd as they were untrue. These men merely sold their wares, and sold them under auspices best suited to the unwary purchaser. Instrument makers assumed no responsibility, and the surgeon was over-

trusting who gave them credit for any such attribute. On the contrary, Dr. Alloway spoke of the almost absolute safety of the use of the carefully kept steel dilator, the vagina being previously rendered aseptic and the operation carried on under irrigation. Of late he said that in such cases, after he was satisfied the uterine cavity had been quite emptied, he filled the cavity with carefully-inserted iodoform gauze, which he removed twenty-four hours afterwards. He spoke highly of his results with this method.

Dr. Armstrong said he preferred using large tents or a number of small ones, as by slow dilatation the os is not so liable to close again before the contents of the uterus are evacuated.

Dr. Gardner preferred Tait's rubber dilator, but also has good results from sponge-tents. He always disinfects the latter by rolling them in iodoform before using. He agreed with Dr. Alloway that in such cases as the one related rapid dilation is to be preferred.

Fibromata of the Os Uteri.—Dr. Alloway also exhibited a small uterine fibroma (size of a walnut) which had originated in the cervical wall, had become pediculated, and hung from the os uteri. It was twisted off with the vulsellum. The case was admitted into the Montreal General Hospital suffering from severe metrorrhagia and pelvic pain. She left hospital a few days after being relieved of the growth. Dr. Alloway spoke of the extreme rarity of fibromata of the cervix, and of the hemorrhagic endometritis which was maintained by the presence of so small a neoplasm.

Dr. Alloway also exhibited the anterior segment of the cervix uteri, containing, just below the level of the internal os, a small fibroma (size of a horse bean). The parts had been removed by Schröder's method of trachelorrhaphy. The patient was 40 years of age, had borne one child sixteen years previously, and of late years had suffered from menorrhagia and pelvic pain. Dr. A. also did, at same sitting, an anterior and posterior colporrhaphy on this patient.

Dr. Armstrong had a case of fibroid of the cervix in the Western Hospital. The tumor was the size of an orange, and

projected into the vagina. It was easily enucleated, with complete relief from all previous symptoms.

DR. GARDNER said he had only met with one case. The tumor was the size of a hen's egg, with broad attachment, and occurred in a woman of 50 years. The growths were very distressing, and often gave rise to serious complications at parturition when long. He quoted a case in point where, at labor, it was found possible to raise the tumor above the pelvis, and thus allow of the passage of the child. The patient died of hemorrhage.

DR. GURD found a tumor the size of a small ball projecting from the os of a woman who consulted him for frequent hemorrhages. He intended operating, but the tumor enucleated itself, and was passed per vaginam.

Correspondence.

IS MODESTY THE BEST POLICY?

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS,—I see by a recent number of the *Canadian Practitioner* that Toronto has facilities for operating equal to those of any place in the world, that abdominal surgery in consequence is making very rapid strides, and that the number of operators and operations is increasing *pari passu* with the well known remarkable increase of the population. This is proclaimed with the modesty which is a characteristic of the dwellers in that lake-side city. The question is asked, "Is Toronto destined to become the Birmingham of the Continent or something more?" The editor pauses for a reply, no doubt aghast at his own audacity. We might here remark that it is very difficult to play Hamlet with Hamlet left out. Mr. Lawson Tait has many ardent and slavish followers in Toronto, and it is said that more apostles are on their way out, but it is evident that they follow their master at a distance—a very long distance—and if they endeavour to set up a new Birmingham it will no doubt be Brummagem. In the same journal there is another modest editorial on the Ontario Medical Council in which the question of reciprocity with Great Britain is dis-

cussed; it is stated that notwithstanding the well-known loyalty of Ontario she cannot recognize "the cheap medical corporations" of Great Britain, and the writer regrets that Great Britain has not a central examining board "such as ours." God forbid!! The so-called cheap corporations at least have examiners who are to some extent acquainted with the subjects they examine in, and, besides, they are supervised by assessors from the General Medical Council who are acknowledged to be at the head of their profession both as teachers and practitioners. Can as much be said of the Ontario Medical Council? It is a well known fact that their examiners are not appointed because of their special knowledge but for territorial and political reasons, that the very men (the teachers) who ought to be the best examiners, especially in the primary subjects, are excluded because of—shall I say—their fitness. That students prepared by teachers, the most advanced of the day, are examined by men whose knowledge, to say the least, is not up to date, who rely on text books long ago obsolete, and know so little of their subjects that they look upon the advancement of new views as heresy of the worst type. Until the Ontario Medical Council alters its examiners and their methods of examining, it will have little to boast of except the number of its rejections. Ontario has much yet to learn in medical matters, and it would be as well for her to remember the old proverb that "good wine needs no bush."

I am, Sirs, yours truly,

M. R. C. S.

ILLEGIBLE PRESCRIPTIONS.—A fatal poisoning case arising out of the careless manner in which the prescriptions of medical men are often written has occurred in France. A physician gave to his brother, who was suffering from migraine, a prescription for a dose of antipyrin. Unfortunately, the pharmacist to whom the prescription was taken happened to be out, and the paper fell into the hands of a female assistant, who, instead of *antipyrin*, read *atropin*, and dispensed accordingly.

Selections.

Prophylaxis in Scarlatina.—Bæumler (*Munch. Med. Wochenschr.*, 1888, No. 42, p. 703) gives some statistics showing the high rate of mortality from scarlet fever, and reviews the complications which may occur. Prominent among these is albuminuria, to which he calls especial attention. A careful distinction is to be drawn between the albuminuria frequently occurring early in the disease, accompanying high fever, and lasting but a few days, and that developing at the third or fourth week, which is often very persistent and may be attended by all the evidences of a severe nephritis, though the amount of albumin be small. Regarding the prophylaxis against scarlatina, the two questions arise, Whether this is possible, and whether it is necessary? Though this disease is so much more dangerous than measles, the disposition to get it is very much less. Only in a few of the early years of childhood is there a really considerable tendency to catch it from others, and this rapidly grows less with advancing age. An important point, therefore, is that the longer the child can be protected from the disease, the greater is the likelihood that it will escape it entirely. As is well known, the contagium of scarlatina is always derived from some other case; it possesses a very great vitality; it is active from the earliest beginning of the disease until far into convalesence; and it usually requires a very short period for its incubation. The author reports cases to show that the breath may carry the contagion before the appearance of any eruption, though the chief danger is during the stage of desquamation. It is therefore absolutely necessary to isolate patients as soon as possible. The clothes can be disinfected, but it is virtually impossible to disinfect the epithelial covering. A fixed time during which the patient must be isolated cannot, therefore, be named, but the child must remain away from others until the shedding of the epithelium, especially that of the palms and soles, is entirely completed. The author has known this to require sixty-three days from the onset of the disease, and a still larger number has been reported by others. Desquamation can perhaps be hastened by bathing with warm soap-water, and the dissemi-

nation of scales hindered by inunctions. It is very important that the scalp be treated in this way, as the scales of this part are fine and are shed early. A convalescent room is of especial value for those patients who feel well, but who cannot with safety mingle with others. Children who have come in contact with cases of scarlatina should remain under observation ten or twelve days before again joining other children. Those in attendance upon the patients should wear some outside garment in the sick-room, and change their clothes and wash their hands in carbolic water on leaving it. The sick-room should be thoroughly aired every day, with proper precautions that the patient take no cold. All the linen used about the patient is, while still in the sick room, to be put in a three per cent. carbolic acid solution, and then boiled with a strong soap. Shoes are to be disinfected with the carbolic water, and clothes treated with steam. The walls of the sick-room, if painted or papered, are to be rubbed down with bread after the patient has been removed, the iron and wooden furniture and the floors washed with a carbolic solution, and the curtains, mattresses, etc., subjected to steam. Special vehicles should be employed to bring children with scarlatina to hospitals. Finally, precaution should be observed against the carrying of the disease by third persons, domestic animals, books, letters, milk, etc.—*American Journal of the Medical Sciences.*

Clinical Experiments with Ether.—Dr. Fritz Feuter (*Deutsche Zeitschrift f. Chirurgie*), Dec. 1888), in an elaborate article upon ether anæsthetization, reviews the literature of the subject, and records his own experience in a large number of cases. He has always employed a large face mask, around the edges of which a folded towel is laid to prevent evaporation of the drug. The following four points were separately dealt with as being of most importance: (1) the time from the beginning of anæsthetization until anæsthesia is produced; (2) the quantity of ether necessary for this; (3) the total quantity of ether used; and (4) the duration of the anæsthesia. His method of administration is as follows: From a graduated bottle about fifty centimetres are poured upon the mask for an adult, for children half this quantity is sufficient. The mask is then slowly brought down to the face, so that the

patient gradually becomes accustomed to the fumes; this does away with that painful choking which always occurs if the mask is abruptly placed upon the face. So soon as the mask is well over the face, a folded towel is placed around it, and the mask is not removed again until there is complete relaxation of the extremities. In this way the patient is continually inhaling ether fumes, for even his exhalations are partly re-inhaled, and assist in producing anæsthesia. With these precautions carefully adhered to, the author has invariably found that complete anæsthesia could be induced within two minutes. More than this, the amount of ether subsequently required to maintain unconsciousness is remarkably small. Often in operations of over a half hour's duration, and even longer, no addition of ether is necessary. In his opinion the two most important points upon which the success of etherization depends, are the concentration of the fumes and the non-removal of the mask. The nausea following etherization he believes to be due to the swallowing of saliva which is filled with ether, the secretion being greatly increased by the drug; naturally, therefore, the less ether used the greater probability that nausea will not be produced; and indeed his experiments seem to justify this conclusion, for in 150 cases vomiting only occurred in 10, and in two of these the patients had taken a meal immediately before the operation. In quoting the statistics of the Geneva clinics, he states that out of 553 cases, vomiting occurred in 148. Feuter continues by giving a list of personal observations which differ bnt slightly from those of other practitioners. One fact, however, deserves special notice, viz., he has observed in several cases that when the patient has taken a moderate quantity of alcohol just previous to the operation the anæsthetization is greatly accelerated; indeed, in one instance hardly a minute passed before the patient was in a complete stupor.

In the second part of his article, which Feuter designates the "experimental part," some cases are cited in which serious results have followed the use of the drug. Emmet was the first who pointed to the danger of etherizing patients affected with nephritic troubles. He claims that it is absolutely necessary to examine carefully the urine of such patients before operating, and holds that the presence of albumin is a positive contra-indication for the use of ether, and direct indication for

the use of chloroform. Other authorities are of the same opinion. In direct contradiction of the above statements, Feuter declares that he has frequently etherized cases of albuminuria without these symptoms resulting. Of extreme interest was the case of a child of five months which was operated upon for cavernous angioma of the left arm and the right side of the thorax. It was not noticed upon admission that the child was suffering from acute albuminuria. The cauterization of the angioma necessitated anæsthetization, and this was done with ether. Three days before the operation large quantities of albumin had been traced in the urine, but neither immediately after the operation, nor until three days later, could the slightest trace be found. Another similar case is quoted. Feuter then records six experiments upon dogs, which he made at the Pharmaceutical Institute of Berne, with the following result: A general decrease of temperature was always observable at the rate of about one degree centigrade an hour. After death the whole abdominal and thoracic cavities were pervaded by a strong smell of ether. The heart was found in diastole. Neither macroscopically nor microscopically did the kidneys show any change. Albumin was never found in the urine. This, he thinks, goes to prove that the kidneys are not affected by etherization. Death never occurred except when intentionally caused by excluding all air from the animal. Accompanying the article are complete tables which clearly elucidate both the experiments and conclusions of the author. —*American Journal of the Medical Sciences.*

Psychoses and Gynæcological Operations.—Fillebrown, in the *American Journal of Obstetrics* for January 1889, concludes an article on this subject as follows: Psychoses may result from gynæcological operations in patients without hereditary predisposition. In these cases the prognosis is good. If the mental trouble does not appear within four months after the operation, it probably has no connection with it. In the majority of these cases the convalescence is abnormal. The fact that a patient is precisposed to a certain psychosis ought not to be regarded as a contra-indication to an operation. If she is actually insane, a gynæcological operation should only be performed as a final resort. In recording the

history of an operative case particular attention should be paid to the family history, with the view of discovering a possible hereditary taint.—*Ibid.*

The Influence of Removal of the Uterus and its Appendages on the Sexual Appetite —Mr. Lawson Tait (*British Gynæcological Journal*, Nov. 1888) cites a number of cases in which not only oophorectomy but hysterectomy had been performed without diminishing the sexual appetite. In several women it was actually increased. The most striking evidence that the ovaries had no influence upon it was shown in the case of virgins who were operated upon when young, and afterward married and developed a full capacity. Seven cases are cited. In the discussion of the paper the consensus of opinion was on the side of Mr. Tait.—*Ibid.*

Vicarious Menstruation.—Parsons (*Ibid.*) reported the case of a healthy young woman, aged 19, who had never menstruated, but had severe epistaxis at irregular intervals. Treatment, both medicinal and electrical, was of no avail. In the discussion on the paper, Dr. Bantock affirmed that he believed in vicarious menstruation, and cited cases. Dr. Heywood Smith suggested the term "alternating," as more appropriate than "vicarious" menstruation. Mr. Tait had never been able to find but one authentic case himself; while he did not deny that the condition might exist, he thought that medical students ought not to be taught that epistaxis in young women wos a common expression of vicarious menstruation.—*Ibid.*

Juniper Berries as a Diuretic.—The inspissated recent juice of common juniper berries is highly praised by Dr. Goldschmid, and it is recommended by Prof. Vogel of Dorpat, as the best diuretic for children. While being most effective, the remedy is exceedingly mild and altogether free from any unpleasant accessory effect. Two or three teaspoonfuls should be given daily, diluted with water and sweetened with sugar. Young patients take it very readily.—*Brit. Med. Journal*, Jan 12, 1889.

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ATHLETICISM.

Some months ago a Scotch newspaper conducted a "doctor's symposium" with a view to elicit the opinions of the profession upon the question as to whether the English race was undergoing physical retrogression. One of the questions—Do you think that the increased indulgence in physical sports has, on the whole, a good influence on health?—elicited a verdict almost unanimous that the influence was beneficial. One writer, however, has made a true observation to the effect that in most instances the general result of athleticism is not so much to make the weak strong as to make the strong stronger. And this is, indeed, the effect of this strange worship of muscle to which we have given ourselves up in the present day. The element of competition has destroyed the benefit of healthy exercise. So far as our colleges are concerned athleticism has run full tilt into amateur professionalism. If all men systematically were to practise, say, running, there would be doubtless great improvement in the general physique, but the encouragement given to races tends not to make the ordinary student give exercise to his limbs, but to encourage he whose limbs are already in good order to further efforts with the desire to reduce his time record. This desire to outdo rivals is undoing all the good that is to be derived from healthy exercise. What more pleasant than a walk across country with a friend or two, resting here or there to admire scenery or to examine flowers or rocks, but when such a walk is converted into exhausting toil by forcing the pace so as to make the distance in a shorter time than others did, then pleasure ceases and fatigue and exhaustion begin.

The Canadian profession have to consider the question whether they are justified in giving their full sanction to much of what is called healthy athleticism. Is there danger in this excess of snow-shoe tramping? We are inclined to consider that such exercise must be carried on with great caution in order that it may not develop into a source of danger to our young men. Hurried marches across the mountain at a forced pace throw a heavy strain upon lungs and heart, likely to cause eventual damage unless there be a careful grading of the amount of work suitable for each individual and the time in which such efforts are to be accomplished. In short, those who seek recreation and with it health must bear in mind that fatigue is not exercise, and that a sense of weariness means that too much work has been done. There is no health gain to be had out of exhaustion.

PRACTICAL SURGERY.

Those who have made a study of that curious and interesting creature, the modern medical student, will not have failed to notice that one of his characteristics consists in a tendency to cultivate the powers of memory and to neglect those of observation, to devote himself more to the science than to the handicraft of his calling. Experienced teachers find that many students can commit to memory the steps of an operation and be able to describe it faultlessly on paper, but would look puzzled and confused were they asked to perform the very same operation on the dead body. The question of introducing an examination in practical surgery has been under the consideration of the heads of the profession in Great Britain. The effect of such a change could hardly fail to be most beneficial. Practical operative skill would have to be acquired, and a new and startling interest would be added to the surgical demonstrations. A difficulty lies in the way of progress. Courses of instruction leading up to such an examination would require a large supply of subjects. Fortunately, in Lower Canada, such material can be freely obtained. With such opportunities at command, our surgical teachers have but to show a lead in this matter.

This important question was fully discussed at a meeting of the General Medical Council held in December last. The con-

joint boards in Ireland and the Universities of Cambridge and Glasgow have already adopted the change, and the example will soon be followed generally. The Council came to the conclusion that the performance of operations on the dead body was a highly important part of a complete test for the efficient practice of surgery, and recommended examining bodies to reconsider the means they might use for amending that part of their examination.

THE TREATMENT OF TABES DORSALIS BY SUSPENSION.

Prof. Charcot has been treating, during the past three months, a number of cases of tabes dorsalis by means of suspension. The treatment is carried out by means of a Sayre's ordinary suspending apparatus. The patient is suspended usually from one to three minutes every second day. In fourteen cases treated in this way, the beneficial results were very marked in eight, and in all there was mere or less amelioration. The first effect usually noticed is a lessening of the inco-ordination. This showed itself even after the first suspension. A case is referred to where a patient was unable to move or even stand without assistance, while after about twenty suspensions he could walk several kilometres without the use of a cane. In all the cases there was marked amelioration of other prominent symptoms of this disease. The lightning pains, the bladder troubles, the anæsthesia, were found to have disappeared or were greatly relieved. In no case, however, was there noticed a return of the knee-jerk or a disappearance of the pupillary symptoms. The treatment was first practised Matchoukowsky of Odessa, who published a pamphlet on this subject in 1883. He was accidentally led to employ it from finding it beneficial in a case of tabes complicated with disease of the vertebræ.

No doubt we will soon know whether any permanent benefit follows this procedure, as cases of tabes dorsalis are unfortunately very common, and all our ordinary means are so worthless that anything that promises even relief will be eagerly seized upon by the physician.

CHRONIC COCAINISM.

From a considerable number of observations it would seem that hallucinations of general sensibility are the first and most pronounced symptoms of chronic cocaine poisoning. M. Magnan (*Le Bulletin Médical*) reports three cases presenting various symptoms, but in all, the most marked were hallucinations of general sensibility. Two of Magnan's patients believed they had microbes under the skin, while the third thought that he had crystals of cocaine. Visual, auditory and olfactory hallucinations are frequently present in chronic cocainism, but they are later in making their appearance. Epileptic convulsions occur also. In two of the three cases reported they were present. Sensorial hallucinations do not usually form as prominent a feature of cocaine poisoning as they do of alcohol and morphine poisoning.

SLEEP.

From time immemorial, the physiology of sleep has been a subject of the greatest interest to the philosophical physician. To recount the views advanced to explain this truly wonderful phenomena would serve no useful purpose, except to emphasize how prone we are to be satisfied with crude explanations. The theory advanced by Durham and Hammond that sleep is due to anæmia of the brain has, unfortunately, done duty for many years. This crude hypothesis is still quoted in many standard works as the true explanation of the cause of sleep.

In a recent article (*Archives de Physiologie*, 1 and 2, 1889) Brown-Sequard shows that the condition of the circulation has nothing to do with the production of sleep, that sleep occurs irrespective of the condition of the cerebral vessels. He has proved that sleep occurs in guinea pigs and rabbits after section of the sympathetic on each side, and in cats and dogs after section of the vago-sympathetic on one side and removal of the superior cervical ganglion on the opposite side. As these operations paralyze the cerebral vessels, we have normal sleep in spite of cerebral hyperæmia. Brown-Séquard looks upon sleep as the result of an inhibition of intellectual activity. The consideration of a number of associated phenomena which occur during sleep has led the distinguished author to the above

conclusion. During sleep there is an activity of certain parts. We have, for instance, contraction of the pupils, falling of the eyelids, contraction of palpebral orbicular muscles, contraetion of the internal and superior recti, etc. As these phenomena are inhibitory, he considers also the loss of consciousness, the slowing of the pulse, and respirations as inhibitory.

This explanation of the phenomena that attend sleep is certainly more likely than that advanced by Preyer and others to account for them, on the ground that the cerebral cells are poisoned by the products of their own work. In a future article we intend referring to this subject, especially in connection with the subjects of toxic sleep and hypnotism.

—Hœsslin (*Munchener Med. Woch.*) has found concentric limitation of the field of vision in neurasthenia and other functional neuroses. He suggests the presence of such limitation as a test to distinguish between real and feigned symptoms following traumatism.

—In a recent lecture (*Le Bulletin Médical*) Charcot referred to some cases of exophthalmic goitre under his observation, where a slight degree of paraplegia was present. In its origin this paralytic condition resembles closely the "giving away at the knees" so frequently complained of by tabetic patients. Owing to its frequency, Charcot is inclined to look upon it more as a symptom than a complication of exophthalmic goitre.

—M. Edgard Hirtz says that in the immediate neighborhood of patches of urticaria a capillary pulse can be readily noticed after gentle pressure on the skin. He looks upon this sign as a proof of the vaso-motor origin of urticaria. A capillary pulse has, however, been noticed by other observers around the pustules of smallpox and in the vicinity of patches of erythema.

Hygiene in Italy.—Travelling in Italy is not without its dangers. The land of poetry and art seems also the home of disease and dirt. Two very unpleasant visitors are at present there—smallpox and cholera. There has been great neglect in vaccination, especially in the northern provinces and islands. The vaccine lymph supplied has been of very poor quality,

having been criminally adulterated with glycerin and rendered almost useless. For this nefarious traffic certain Catanese are about to undergo public prosecution. Smallpox, however, is now thought to be subsiding in the Sicilian towns, Catania now recording ten cases and Messina only two per diem.—(*Lancet*, Dec. 1, 1888.)

Cholera prevailed extensively in the city of Naples during 1887, but the fact of its presence was not allowed to figure in the sanitary reports lest, amongst other evil consequences, a panic might arise amongst the purse-bearing English and Americans. Concealment was practised, and the chief civic authority of the year in question was actually complimented on the patriotic step he had taken in not giving alarm. Many Italian towns furnish no regular tables as to death-rate of the population, and others are not above suspicion of undue manipulation.

THE "LANCET" MEDICAL FUND.—The proprietors of the *London Lancet* many years ago, when the subscription and sale first reached 10,000 copies, discussed the prospect of appropriating some small sum to the source of a Compassionate Fund for the benefit of those members of the profession whom undeserved misfortunes had overtaken. At that time other pressing charitable necessities eclipsed the scheme, and for a time at least it was laid aside. The *Lancet* begins the new year with the announcement that with the co-operation of the presidents of the College of Physicians, the College of Surgeons and the General Medical Council, it has started an organization which will provide pecuniary help in small sums and upon cases of emergency to medical men, their widows and children. The *Laneet* is to furnish the sum of three hundred pounds a year, and it is hoped that this handsome annual gift will be largely supplemented by subscriptions from the well-to-do members of the profession. It is wisely proposed that the almoners of the fund shall have, at their discretion, the power to relieve urgent necessities either by direct gift or by means of a loan free of interest. The establishment of such a fund will prove a benefit alike to the sufferer as well as to the benevolent. Every medical man in good standing is likely, in the course of the year, to have calls made upon his purse

for the relief of some suffering brother. Such sums are capable of doing more good when put into a general fund administered by those who have gained experience in the management of such relief, and, on the other hand, an unfortunate man who, from illness or other unavoidable cause, can no longer keep the wolf from his door, would much prefer seeking help in the form of a loan from a fund established for that purpose rather than make application for pecuniary assistance to private individuals. The movement has our good wishes.

Medical Items.

—The volume (98th) of Braithwaite's Retrospect for July to December, 1888, has been issued.

—Krafft-Ebing of Gratz has been appointed successor to Prof. Leidesdorf of Vienna.

—Prof. Billroth's numerous friends and admirers intend celebrating his 60th birthday, which takes place on the 23rd of April.

—There are 852 medical students attending the different Swiss universities during the present winter session. Zurich heads the list with 264. The population of Switzerland is under three millions.

—An International Congress of Dermatology and Symptomography is announced to take place in Paris in connection with the International Exhibition on August 5th to 10th. The Presidents are Dr. Ricord and Professor Hardy. A number of important subjects will be discussed.

—Dr. Gowers has resigned his position in connection with the University College, London. It is unfortunate for students and medical science that distinguished English physicians and surgeons so frequently give up their teaching work at the very period of their lives when they are most useful.

—The following have been elected officers of the Nova Scotia Branch of the British Medical Association for the current year: For President, Deputy-Surgeon-General McDowell, C.B., A.M,D. (re-elected). For Secretary, W. Tobin, M.D. (re-

elected). Honorary Treasurer, Dr. Trenaman, City Medical Officer. Council: Drs. G. F. Black, Campbell, Farrell, Slayter, Surgeon Fowler, A.M.S., and Staff-Surgeon Sweetnam, R.N., H.M.S. Tourmaline.

AN UNCOMFORTABLE PATIENT.—A lawsuit interesting to medical men in obstetric practice has recently been tried in London. Dr. A. was engaged to attend Mrs. B. in her approaching confinement. In the dead of night Mr. B. summoned the doctor through the speaking tube at the side of the hall door. There was no undue delay, but still the anxious husband kept up such a din that the accoucheur declined to answer the summons, and refused to have anything to do with such an unpleasant patient. Another medical man attended the case, which appears to have gone off most satisfactory, but not satisfied with the course of events, the discontented husband sought Dr. A. in his consulting-room and attacked him both with tongue and fist. The magistrate who presided at the subsequent action for assault held that a medical man was quite justified in declining an obstetric engagement under such circumstances, and fined the defendant accordingly.

—Messrs. J. B. Lippincott Company announces to the profession the publication of a "Cyclopædia of the Diseases of Children," medical and surgical, by American, British and Canadian authors, edited by John M. Keating, M.D., in four imperial octavo volumes; to be sold by subscription only. The first volume will be issued early in April, and the subsequent volumes at short intervals. A thorough knowledge of the diseases of children is a matter of the greatest importance to most physicians, and as this is the only work of the kind that has been published in English, it will be invaluable as a text-book and work of reference for the busy practitioner.

—The mineral water of La Bourboule—of which there are two chief springs, "Choussy" and "Perrière"—is, of all known waters, that which contains the largest proportion of arsenic, allied with the best adjuncts for its assimilation. It is a natural arsenical medicament, far preferable to any pharmaceutical preparation, because it is in this form that arsenic is most easily digestible and most efficacious. By its use,

moreover, all those risks of error by excess of quantity, which are not entirely inseparable from artificial preparations made in the laboratory of the chemist, are avoided. One litre of the water contains 28 milligrammes of sodic arseniate (or at the rate of 1-96 grains per gallon); so that the third part of a litre (nearly three-fifths of a pint, or a large tumberful) contains the average dose of arsenic pharmaceutically administered. Furthermore, the mineral constituents of the Bourboule water are the same as those of the blood. It contains about $6\frac{1}{2}$ grammes of mineral salts, viz., nearly three grammes each of chloride of sodium and bicarbonate of soda, with other minor elements in small proportions; making it equivalent to the "mineral serum of the blood, issuing naturally from the bowels of the earth." This mineral water is consequently, of all others, the best adapted to repair the waste of the mineral constituents of the blood; it alone combines all the properties which go to constitute the most fortifying, the most restorative, and the most easily assimilated medicine. It is eminently fitted for, and digestible by, delicate children, debilitated adolescents, and adults of weak constitution, on whom its revivifying influence is most remarkable. The dose varies from half a tumblerful to two or three tumblerfuls a day, one-half the quantity for children. It may be taken at meal-times, pure or mixed with wine. Sometimes it is best taken half an hour before meals. If the digestive organs are at all unfavorably affected by it, it may be warmed by the bain-marie, or mixed, either with a warm infusion of limes or with orange-peel juice, or Selters waters, etc. In case of colics or diarrhœa, two or three drops of tincture of opium or belladonna may be added. Bourboule water, used as a lotion, local douche, or pulverized in the form of spray, is, in general, an effective cure for slight cutaneous diseases, or affections of the mucous membrane, where accessible, especially when imbibed at the same time. It preserves the freshness and beauty of the complexion, and heals chaps, by restoring the suppleness of the epidermis, and undergoes no deterioration by exportation.

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VALEDICTORY ADDRESS

DELIVERED TO THE GRADUATES IN MEDICINE OF McGILL UNIVERSITY, APRIL 1ST, 1889.

BY WESLEY MILLS, M.A., M.D., L.R.C.P., LOND.,
Professor of Physiology, McGill University, Montreal.

Gentlemen, Graduates in Medicine:

Some of my colleagues, with more confidence in my power of rapid preparation than I have myself, suggested that I should avail of this occasion to speak of the achievements and character of our late Dean. But when one has, within a few days, read one thousand pages of foolscap in the form of examination papers, and finds several hundred more confronting him, he is not worth much for any high undertaking.

Canada's greatest physician—the "grand old man" of the medical profession in this country—has passed away! Would that I could speak of him worthily, but the task is too mighty for me! But even were I competent, there are strong personal reasons which would render it impossible. A friendship beginning in profound respect on my part when I had the privilege as a student of sitting under the magnificent lectures of the late Professor of Medicine, and feeling the ennobling influence of the man; and on his part, the fancied or real discovery in me of—I know not what,—a friendship deepening with the rolling years has suddenly been dissolved.

When, in 1881, after being abroad, I settled in this city and began my career as a very subordinate and almost unrecognized teacher in McGill University, one man in the Medical

Faculty extended to me great encouragement. That man was the late Dr. Howard.

When, again, in 1884, after a more prolonged absence abroad, I took the bold, perhaps rash step, and certainly one unprecedented in this country, of wholly relinquishing medical practice for the teaching and culture of the department of Animal Physiology, amid much hesitation, indifference and lack of confidence, again one man with an insight into the importance of this subject for medicine, given to few, wavered not, but from the first supported both the subject and the teacher with that gigantic moral strength which I felt "like the shadow of a great rock in a weary land." No one in Canada has, directly or indirectly, so encouraged Physiology as the man that I venture to think will be known in future as McGill's great medical Dean.

But Robert Palmer Howard is gone!

I suffer from temporary discouragement and a feeling of apprehension for the future. A king may arise that knows not Joseph. I am overwhelmed with a sense of personal loss, loss to medicine, to the University, and to my own subject.

You will therefore understand why, were I worthy of such a theme, my feelings, so near are we to this recent awful bereavement, are not under sufficient control to warrant me in undertaking its treatment; and this is my reason for these personal references, which, inasmuch as they explain my course to-day, I hope you will pardon.

I shall therefore deliver the address I had prepared, and which was in type before the late Dean's illness began; and if I tax your patience somewhat by references to matters that I deem of great importance, I think I may at least assure you that my remarks will not be of the nature of an oft-told tale.

Each of you is to-day like one who has been walking in a long but narrow avenue, bounded on each side by pleasant, though not greatly varied, scenery, stimulated to maintain a certain rather rapid pace by his leaders and fellow-travellers, and who, all of a sudden, finds himself about to part from those he has pleasurably accompanied. The avenue opens out into a boundless expanse, neither the nature nor the extent of which

he knows. It is uncertain in how far he may either understand or be understood by the great crowd wending its way by different paths across this great area.

Such is the college—such is the world. To drop the figure, you have now closed a busy but somewhat narrow mode of life, and are about to enter on one incomparably wider in all respects. I think too well of you to believe that any one of your number quits the scene of four years of the most important, and not the least pleasant, part of his life's drama without a feeling akin to fond regret; or that he looks out upon the unknown future without a certain degree of anxiety and a sense of manhood's responsibilities, however hopeful he may be by nature, however keen his anticipations of success or bright his prospects.

It is a fact too little realized that we can never get rid of our past. We do to-day, each one of us, represent most accurately the past that belongs to ourselves and our ancestors, as we are determining hourly the character of posterity.

It follows, then, that, however your fortunes may vary, you must ever owe filial gratitude to your *Alma Mater*. The University has aimed to send you forth armed for the battle of life; and though she may have erred somewhat in her methods, you must give her credit for the best of motives.

This aspect of the subject has been discussed frequently, and I shall therefore for a brief space ask your attention to a few thoughts on the relations you sustain to the University by virtue of the fact that you are now a part—a very important part of the University herself. As undergraduates you could chiefly help the University by conforming to her regulations cheerfully and acquitting yourself to the best of your ability in the pursuit of your studies. Now, however, the day of pupilage is past, and you probably scarcely realize that you are not only each a reflector that should radiate the better light of university culture, but that you are now entitled to a voice in the government of the University. You are now at liberty to express your opinions on university matters, not only through the ordinary channels open to every one in a really free country, but also through the Graduates Society or any branches of it that may be formed. You

are represented on the corporation of McGill most directly by the Representative Fellows, in the election of whom every graduate may cast his vote. And allow me, gentlemen, to suggest to you the desirability of at once, before you leave the city, complying with those conditions to be observed in order that you may be able, without further trouble, to vote annually for Representative Fellows.

On the one hand it is the plain duty of the University to place within the reach of all her graduates sources of the fullest information in reference to all her affairs; and it is equally your duty to give such information the most careful consideration. Remember that the time is past, if it ever existed, when the entire interests of a great university can be safely trusted to any one man or any dozen men, however great their ability or however pure their motives. The government of universities by an autocracy of any kind is directly opposed to the spirit of the age. Not that the great multitude should express itself directly in the councils of the highest centre of learning; but I do maintain that the echoes of the humblest village schoolroom should be heard and regarded by the powers that more directly guide the university ship; and you, gentlemen, may be the only medium, possibly, through which these significant echoes may reach the centres of university life. If after the best study you can give to the affairs of your *Alma Mater* you are convinced that all is as well as it may be, then support the University methods heartily; but if, again, you feel the contrary, agitate through the mouth-pieces, the University's constitution provides the changes you are convinced should be made. If the Elective Fellows are not sufficiently numerous, see that their number is increased. As soon as any of them lose their usefulness—become mere gilded men of wood, remove them, and replace them by vital organisms.

I do not think the Representative Fellows should always be chosen from Montreal. The corporation should so arrange its meetings that gentlemen from a distance might attend, and their expenses should be paid. Let us have the best men wherever they are to be found.

It is not well with a university when its graduates do not take a deep interest in her affairs; but this can never, in my opinion, be realized until this important body has the fullest reason for the belief that its representations will receive due consideration. Gentlemen, it is your duty, as well as that of all graduates, to see to this.

Modern Botany has made us familiar with the fact that, though the greater part of a tree is made up of structures now dead or possessed of a very low vitality, throughout the really growing part there is a continuity of the essential protoplasm. Without pushing the comparison too far, may I not truthfully state that the graduates largely represent in the University the essential growing part, the part that most readily adapts to the environment? A university needs, as a tree, the supporting structures, which may be said to represent the conservative element. But it may have these and neither grow nor adapt. It may have these and gradually decay. Let me remind those that may be inclined to despise the importance of the youthful element in university affairs that life—all life—implies *constant* adaptation and ceaseless change. It is either change and progress or it is stagnation and death. With the life of a cell or the life of a university, it is the same—change, change, slow or rapid as the surroundings demand. The time when any man feels like saying "Now all is well, now I will rest," marks the epoch of commencing senility, arrest of progress, decay; and this period seems to be reached by some men fearfully soon. With some it began before they were born. The same holds for a university.

When, gentlemen, I had the pleasure of meeting you in my own lecture-room, you may remember that I occasionally referred, with a view of stimulating you with a glimpse of a grand future, to the great change that is coming over every department of medicine. We are in the midst of a period of unequalled progress. Changes of the most profound character are taking place in medicine as an art and especially as a science. Call it a revolution or an evolution as you will, it is coming—aye, it has come; and happy are they that realize it! I have always maintained

that until the medical profession comprehends that medicine is a branch of Biology it will never perceive its true relations to the study and the practice of the healing art.

Once be convinced of this, and radical changes in the methods of teaching in medical schools must follow. Perhaps no institutions are so full of educational anomalies as medical colleges. This is owing, as an ultimate cause, to this failure to perceive the real nature of medical study, which was impossible till the recent great strides in biology had been taken. Hence it happened that professors were chosen from among the great mass of medical practitioners quite irrespective of any inborn or acquired ability to teach. As the faculties of medical schools often filled the vacancies in their ranks without being responsible to any other body, it is easy enough to understand that men should be chosen because they were respectable in the community and agreeable to the members of the faculty; and perhaps for no other good reason.

On this continent a few of the more advanced schools rank among their numbers one, two or three teachers that are devoting the whole of their time to their professorial duties. These men are allowed the same college status as their colleagues; they enjoy a sufficiently small stipend; and they mostly find, although they may spend the whole of their energies on their specialties and the study of educational problems, that no more weight is attached to their opinions than those of their colleagues who may be so occupied with the cares of medical practice that they have not an hour to give to any problem, educational or other, outside of the crowding round of their professional duties. Hence progress is slow. The day of great things is at hand, but how many see it not! If anything in education needs reforming altogether, it is the methods of medical education. From the beginning to the end of a medical course real knowledge can only be gained by the direct use of the senses, hence laboratory work of all kinds, in which I would include that of the dissecting-room (morphological laboratory) and the hospital wards, must largely occupy the student. As soon as didactic lectures, instead of helping a man to acquire knowledge for him-

self by observation, and to work up the facts into sound generalizations, load the mind with purely abstract conceptions, and hazy, ill-comprehended ideas, they become a positive injury and not a benefit.. Is there a medical school in existence that can claim that correct methods are fully carried out? McGill is well to the front as compared with the best. But let us be candid. If I make to-day a few statements not of that laudatory character so common in this country, I hope I shall not be credited with less love for my own University or my own land than those who only boast of our present attainments.

A system that crowds so much work into four sessions; a system that expects so much at examinations; that keeps men listening to lectures of one hour each from 9 A.M. to 6 P.M., with the exception of a busy period of a couple of hours at the hospital and one hour for lunch, I do unhesitatingly declare an educational monstrosity and a fearful imposition on young, undeveloped natures. This is not the way to develop men, but to dwarf or distort them; and that our students are not more injured is evidence of the strength of their constitutions. No students work so hard ard so cheerfully as medical students, and none are more handicapped by educational blundering.

Gentlemen graduates, I am sure you feel the truth of these remarks; you have groaned under the weight you have had to carry; and even the best men amongst you have felt it too heavy. You have been conscious of trying to keep in form for examination a vast mass of details which you have not digested nor even comprehended; and yet *you* have had greater advantages than most students in America for the acquisition of knowledge and for mental development in the right way.

The term I have just used, "development," raises a question I would urge with all the earnestness of which I am capable. Man has a complex organization, and any system of education that fails to develop all the parts of his nature harmoniously must be to a greater or less degree a failure. There are a few universities on this continent that look after the physical development of men wisely; a few others whose methods for the training of the *intellect* are to a large degree in harmony with

the best knowledge on that subject we possess. But where is the university anywhere in the world that harmoniously develops the whole man? Not one—absolutely not one! In all that relates to the social, the æsthetic, the moral, we are far behind. This is painfully evident in the medical course. A student is to a professor an intellect to be addressed—to be trained to a certain extent if you will, and to be very thoroughly examined periodically. The professor is to the student a statement-supplying mechanism, to be satisfied at examinations by a due return of the ideas furnished. Of all teachers a medical faculty should look to the body. But where is the medical school in which physical culture in the best sense is insisted upon? What provision is made to develop the social and moral, the highest parts of the man, and on which his future usefulness so much depends? In the winter evenings, if you pass near the theological colleges which flank McGill on each side, you may perhaps see the students partaking of their tea comfortably together. They evidently have both domestic comfort and social intercourse, and we are glad of it. Why should the Arts, the Science or the Medical student be turned out of his father's house to make his way as best he can in a large city without, in most instances, a single acquaintance at the outset? We have a fearful responsibility, I feel personally, and the hour is at hand when we must grapple with the problem! Among McGill's many wants, none seem to me so acute as the need of the embodiment of this principle of harmonious development of all the parts of the student's nature. McGill needs, on these grounds, a building which shall permit of the students of all the faculties meeting in a great dining hall and in the amusement and reading rooms, the apartments for physical culture, etc., with which it should be provided. Here the professors might mingle with their students—man to man. It would do both good. This requires money; but four hundred subscriptions of $500 each would ensure the erection and furnishing of such a building. Are there not four hundred men in Montreal with enough patriotism and paternal feeling to subscribe the requisite amount? For the evils that beset our methods in the training of the

intellect of the medical student, the speediest and surest remedy would be a faculty composed of men devoting themselves, as is the case in medicine in some other countries, and in some of the other faculties of our own University, wholly to college work. Such a state of things implies endowed chairs, etc. Already on this continent there is one richly endowed medical school of the character indicated, gradually bursting into the vigor of a growth unwonted in the history of medical teaching on this side of the Atlantic. And McGill has reason to be proud that a graduate of her own (Prof. Osler) has been chosen as one of that carefully selected few that are to man and pilot the new ship. Where shall the next such school be? In the face of the magnificent endowments to this University of one great-hearted man; and to the citizens by himself and a fellow in grand and good works, of a noble bequest for the erection of an institution the usefulness of which all acknowledge,—in the face of these deeds by two of Montreal's citizens, who shall set bounds to the supply of means from the whole body of citizens, especially for what one of McGill's benefactors has called "*the essential profession?*"

The students that McGill has and cares to have are ready for the changes I have briefly sketched as desirable; in fact, many of her present students groaning under the impositions of the present are fondly looking for better days; though it may be they see but dimly in their youth and inexperience what should replace the present; but that there are some great changes devoutly to be wished is felt by the mass of the students but too keenly.

Gentlemen graduates, I am sure you participate in these views and feelings; hence I have thought it not an improper time to give utterance to them, believing that you will endeavor to hasten the day of better things, while still grateful for what you have received, and quite conscious that your own Alma Mater is not in the rear of the best of her neighbors. What I am trying to make clear is that *all* universities are behind; and that, as regards methods of intellectual training, medical schools are especially in need of great and speedy reforms.

But you are, perhaps, aware that one of the sources of embar-

rassment to the universities of this country just now is the result of the interference, either directly or indirectly, of professional bodies with their independent and largely irresponsible examining boards, which are not content with merely examining, but wish to dictate how students shall be taught. This latter is an entirely unjustifiable assumption of power. Those best qualified to judge of methods of training, etc., are those actually engaged in the work, and not, with all respect to them, the busy practitioners of the land destitute of experience in such work. That such men should be appointed examiners of students taught by specialists is at once a gross injustice to the universities and the students, as well as in itself an absurdity. Now, gentlemen, if within the next few years, or at any future time, you should be offered the position of examiner in some of the primary subjects on boards of such constitution, will you accept the position on the plea that if you do not some one equally unqualified will; or will you sacrifice for your university, your country and your convictions any temporary personal advantage? Prove yourself a moral vetebrate and say, "No," as a protest against such anomalous practices. For my part I think your course is clear.

But you are under obligations to your country and your race of even greater importance than those you owe your Alma Mater, and I must not linger on your relations to the University. But before quitting this subject, you will, I am sure, join with me in one remark: That whatever changes may take place in the medical teaching of McGill University in the near or remote future, we do not hope to see in the members of her faculty men that will spare cheerfully more of their time and energy from their main work to their college duties than do my colleagues; nor that any future head of McGill Medical Faculty will embody in himself such a rare combination of professional ability, high sense of honor and justice, such integrity, such devotion in the interests of his profession and his university, or such rare ability as a lecturer, united with lofty aims and with an almost youthful enthusiasm, as did the late Dean.*

* This address was in type before the fatal illness of the late Dr. Howard began, and I have therefore allowed the above passage to stand as it was originally written, with the exception of two words. W. M.

Gentlemen, I must congratulate you on the prospects that loom up, to my eye clearly, before your chosen profession. Such is the progress of biology and allied branches, as chemistry, that within the next two decades, and certainly well within your lifetime, Medicine must be so transformed in every respect, and especially as a science, as to be scarcely recognizable. I have often thought that one of the best realizations that our profession could experience is the slight degree to which medicine has been a science at all until within the last ten years. And even as yet, witness the isolation of the various subjects in a medical curriculum, and the consequently increased difficulty in learning and the loss of energy from disconnected thinking which lasts beyond student-life and handicaps the practitioner all his days. Older literature is fast becoming shelved. The principles of Biology, vitalized by the great doctrines of organic evolution, will surely—let us hope speedily—like a ferment transform the whole. At present you hear little of biological principles outside of one or two lecture-rooms; but in less than twenty years they will dominate the teaching in every department, not excepting the hospital ward. Nor will it be in the form of crude, unverified statements, but as accurately ascertained facts. From what a height the teacher and practitioner of that day will survey the vast field! How much easier his classification of facts, how broad and how clear his principles!

I congratulate you on that unification and correlation which is taking place, notwithstanding old prejudices, in the different departments of medicine. Dental surgery and comparative, so-called, veterinary medicine, are being carried along on that same wave of progress on whose crest human medicine is riding. Until men perceived that disease was not an entity but a condition, varying with the organism affected, it was impossible to see the connection between the different branches of the science or to understand that as nature is one so must all science, including Medicine, when complete, be one. The dental and the veterinary surgeon and the practitioner of human medicine should no longer stand apart. The claims alike of science, our speechless companions and fellow-creatures the lower animals,

and of man himself, cry aloud to us all to unite our forces in the battle against disease, and to attain unto a better light and a broader knowledge. Gentlemen, it may be difficult for you who, in McGill, sit in the same lecture-rooms, work in the same laboratories, and pass the same examinations in the primary departments, as the students of veterinary and dental surgery, to understand why these branches of the profession and that you have chosen are not more closely united; especially as now the interests of the public demand it, owing to the demonstrated communicability of disease from animals to man and the reverse. But there is a corporate and professional pride against which I would warn you. Beware of those that would seek to impregnate you with that which, like a calcifying process, arrests growth. Wherever you meet a professional brother, if he is good man and true, no matter whether veterinary or dental surgeon, or practitioner of human medicine, commune with him,—it will do you good and him good; and if he is not a good man and true, seek better company, no matter by what name he may be called.

But there is an equally bright prospect before the great public. The profession and the public will alike realize that the great mission of the physician is to *prevent* disease. Families will be willing to pay to have their past physical histories studied; they will take pains to preserve for the use of their posterity fuller and more accurate health-records than those to which they have been heir. The laws of heredity will be better understood and, let us hope, acted upon than now, owing to a quickened moral sense which will unquestionably result if our progress is real. The physician of that day will have a pleasanter career, because of less ignorance and prejudice to combat; but he will require to be a better man in all respects than his representative of to-day. His knowledge will not be confined to what pertains strictly to his own profession, but he must, of necessity, be one of the best educated men in the whole community, particularly in science.

It may be that the pure scientist should rank intellectually above the physician of to-day; but the future physician must be both.

Gentlemen, you leave us to-day well abreast of the knowledge of your time. But allow me to remind you that only the fleet runner can fully keep up in the race. Industry well directed, a mind free from prejudice, ever ready to entertain, though not necessarily to subscribe to, every new thing, will keep you in the safe path of progress. And begin at once this career. Never cease to be students of books, and, above all, of the book of Nature, ever open, yet sometimes hard to read. You will, of course, encourage all forms of learning and especially all departments of science, for no one can tell whence the next great advance may come. The limits set to an address of this kind prevents me referring to many matters of great importance in the details of your career as practitioners; but I think you must at some time during your student life have either heard or read advice on many of these subjects.

In this unresting age old things seem to be passing away and all things becoming new. Every man is a unit-force in the civilization of which he forms a part. He either retards or accelerates the car of progress. In addition to the physician's obligations as a preventer of disease by direct consultation with individuals and families, he owes a great duty to that portion of the human race that, from a multitude of causes, is unable to think out and work out its own salvation. What, then, is the duty of the profession to the great ignorant, degraded, comparatively helpless, mass of our fellows. According to some we are each to look to himself; each develop himself; and these people find a refuge for their selfishness under some ill-understood quotation, such as "The survival of the fittest." They would have us believe that their position is supported by the now no longer despised doctrines of evolution. Such views may harmonize with their "evolution," but not with that of the noble Darwin! Survival under a given environment is a mark of the fittest. But who make the environment for these unfortunates? In great part their fellow-men; and unless they make it as good as their light and opportunities permit they are unjust to their less fortunate brethren.

With all kinds of resource, whether of wealth, talent, learning

or aught else, comes an inalienable responsibility. We can no more get rid of it than of our being. The medical profession has, by virtue of special knowledge, a peculiar responsibility to their fellows both as a profession and as individuals. There are great evils at the very roots of human progress, understood adequately only by medical men, not to speak of their special knowledge of hygiene, by which they are eminently qualified to warn and direct the public. And unless the medical profession soon speaks out on some of these topics in language that cannot be misunderstood, surely the very stones will cry out!

We have all sorts of combinations in these days in the supposed interests of special classes. But who has yet heard of a meeting of capitalists with the direct object of devising means to alleviate the condition of their less fortunate fellow-creatures? Where or when have scientists or physicians met to decide upon plans of spreading the rays of a wholesome knowledge in noisome places? We may boast of our civilization as we will, but so long as there are, on the one hand, gross ignorance of essential truths by vast masses of mankind, squalor, poverty and all forms of degradation in our very midst; and on the other, massive fortunes, great ability, scientific knowledge and skill, all utilized for the benefit of the possessors only, all being perfectly content that things should so remain; and so far as the one side is concerned should increase, it seems to me that we have yet to learn the very elements of a high civilization. There may be those who can understand how a physician who does no more than go the rounds of his practice discharges his whole duty to his fellows. But on purely scientific grounds, if no other, I am unable to see how any man can be true to the potential nobility and greatness of his nature who allows himself to become and remain a mere diagnosing, prescription-writing mechanism, or a neuro-muscular mass co-ordinated to manipulate a scalpel or a saw! To be this only means the atrophy of the best part of man's nature.

If these doctrines seem new it is because they are so old. They are opposed neither to nature, nor science, nor the teachings of the great Nazarene. We pay unbounded homage to intellectual ability in our age. But though we admire the fox

for the cunning by which he secures his prey, or the shark for his teeth, we do not respect them for these endowments; and if so, why should we respect the man who, like the shark, uses his abilities to get the advantages in the race of life without reference to the results to others. I have never been able to understand it. I cannot respect such men. Such deference is a form of material worship, inherited from grosser ancestors, to be dominated as speedily as possible to higher principles.

Gentlemen, I address those remarks to you in the hope that you may not wait for older men to move; but that you may be induced, possibly, to initiate independent action yourselves on higher grounds than have been hitherto generally recognized. But should you do so, I cannot promise you that your equals or others will strew flowers in your path. You will probably be much misunderstood, and as a consequence you may be subjected to some of the many forms of refined persecution of our day. You may expect to be called an "extremist," a "visionary," a "dangerous radical," or perhaps a "crank," a term now often applied by stupid people to those they are incapable of understanding. But take your stand. You may live to see your dreams realized; but if not, you may enjoy the satisfaction of feeling that you have, in some degree at least, assisted in human progress.

Gentlemen, a word in regard to your relations to the schools of our land. If there is anyone who, by virtue of his education, his special knowledge, and his method of viewing things, is fitted to make one of a school board, it is the physician with a broad, liberal education. But how few of our profession occupy such a position. I think I am correct in stating that in the largest city in the Dominion not one physician has sat upon her school board for twenty years, although there has been a great plethora of the members of another learned profession. Your lot may be cast in a small place. The teacher, the preacher and yourself may be the sole representatives of the higher culture. Form a triumvirate for mutual help, and unite your forces in the cause of civilization. Drop into the school-room occasionally; speak a few encouraging words to the teacher. Make him see, if he

does not, that great destinies are in his hands; smooth his often rugged path; show the community that education, like all else that pertains to man, must be in harmony with the laws of his physical organization. It seems to me that your privileges and your obligations are, in this direction, great.

Finally, gentlemen, though men differ on this subject and on that, there is one on which all are agreed. Mankind, of whatever race, language, religion or place in the human scale, unite to respect and love the man that alleviates human suffering,—who prevents or wipes away the tear of pain, of bitterness, of repentance, or any form of misery.

Graduates in medicine of 1889, this is your privilege, a part of your noble mission to men. Go—go forth and discharge it. Farewell!

ON THE INTERCOMMUNICABILITY OF TUBERCULOSIS BETWEEN MANKIND AND THE DOMESTIC ANIMALS.

By Edward Playter, M.D, Ottawa,
Editor "Canada Health Journal."

(*Read at the meeting of the Ottawa Medico-Chirurgical Society, March* 8, 1889.)

Of all the destroyers of human life, tuberculosis stands first. Evidently not less than at least 10,000 lives, and possibly 15,000, are destroyed by it in Canada alone every year. From one-sixth to one-tenth of all deaths almost everywhere are caused by tuberculosis, chiefly by that form of it best known as pulmonary consumption. The investigation of the cause and the source, then, of this most destructive agent is a subject of the very first importance, not only to this locality but to the country at large. As it is not my object to enter into the unhygienic conditions which give immediate rise to this disease—to suitable soil for its development; or, rather, which so depress the vitality as to enable the bacillus or its spores to take root in the human organism, develop, multiply and destroy life, I will now at once endeavor to lay before you some of the evidence which has been recorded to show that the disease may be, and probably frequently is, communicated to the human organism from domestic animals and more especially from cows.

About seven years ago at this present time, Mr. Veterinary-Surgeon Shaw, of the U. S. Bureau of Animal Industry at Washington, said, in the *U.S. Health Bulletin:*

"To-day, after ten years of experimental observations by Villeman, Viscar, Klebs, Zurn, Bollinger, Leisering, Chanveau, Bagg, Semmer, Guenther, Harms, Biffi, Virgad, Gerlach, Buhl, Tilbury, Fox, Burden, Sanderson, and a host of others, it has been definitely established (1) that the tuberculosis can be transmitted from animal to animal, from man to animals, and presumably from animals to man, by inoculation, or by the accidental contact of tuberculous matter with a raw or abraded surface; (2) that the raw tuberculous matter taken from man and animals and eaten by other animals may determine tuberculosis in the latter; (3) that even the flesh of tuberculous animals will some-

times produce tuberculosis in animals that consume it, though with less certainty than if the tubercle itself were taken; (4) that the milk of tuberculous animals will at times produce tuberlosis in susceptible subjects, and above all where the morbid deposit has taken place in the udder; (5) that cooking of the tuberculous matter gives no guarantee of protection, as flesh is a poor conductor of heat, and tubercle that had been boiled from a quarter to half an hour has readily infected a number of animals that partook of it; and (6) that tubercle matter mixed with water and thrown into the air from an atomizer causes with great regularity the development of tubercles in the lungs of animals respiring such air."

Within the last seven years the subject has received a great deal of attention, and a great deal of scientific investigation has been the result.

The bacillary origin of tuberculosis, and the transmissibility of the disease from one individual of the human race to another individual, are points now universally admitted, and not doubted by any one, I believe, whom we can regard as an authority. The disease is the most common of all human diseases, except the ordinary infectious diseases of childhood, and the sources or vehicles of it must be proportionately common. What are they? Dr. E. F. Brush, who is, I believe, connected with the Bureau of Animal Industry at Washington, and who, as he states, has long been compelled to devote his attention to the subject of diseases afflicting dairy stock, in a lengthy article in the *N. Y. Medical Journal*, in March of last year, on the question we are now considering, declared it as his "candid opinion" that tuberculosis "is all derived from the bovine race."

The human race is almost everywhere very closely associated with the cow. As Dr. Brush words it: "We are veritable parasites on this animal. We milk her as long as she will give milk, and we drink it; then we kill her, eat her flesh, blood, and most of the viscera; we skin her, and clothe ourselves with the skin; we comb our hair with her horns, and fertilize our fields with her dung, while her calf furnishes us with vaccine virus for the prevention of smallpox."

Now the cow has tuberculosis and we have tuberculosis. If we regard her as a possible common centre of the infection, we have a reasonable and full explanation of the commonness of consumption. Where this animal does not exist, pulmonary consumption, it appears, is unknown. The inhabitants on the steppes of Russia, who have no cows, have domesticated the horse, using its milk, meat, and skin, and it is said a case of pulmonary tuberculosis has never been known to exist among them. The Esquimaux have no cows, neither have they pulmonary phthisis, and it appears to be a fact that where the dairy cow is unknown pulmonary consumption does not prevail. Evidence that a certain amount of relation exists between the death-rate of man and animals respectively from consumption, and that this relation is materially affected by the use of tuberculous flesh for human food, is afforded in a chart issued by the authorities of the Grand Duchy of Baden in the year 1881. The chart applies to fifty-two towns, and shows that where tuberculosis was prevalent among cattle it was proportionately prevalent amongst the human population, and was particularly prevalent in towns in which the number of low-class butchers were greatest. One remarkable exemption to this was found in the town of Wertheim; but it was significantly pointed out that from this town large quantities of sausages made from flesh of inferior quality were annually exported. Many observations of a like nature have been made in the United States; that is, that where tuberculosis is prevalent among cattle it is proportionately prevalent amongst the human population. At the Paris Congress on Tuberculosis in July last, Dr. Robinson of Constantinople, in a communication on "Consumption in Asia Minor," stated that, notwithstanding the fact that the inhabitants of this country lived much in the open air, the disease was very prevalent, and ten per cent. of his patients suffered from it. The natives recognized its contagiousness, and always destroyed all articles, etc., used by those suffering from it. The frequency of the disease, Dr. Robinson said, there could be no doubt, was owing to the free consumption of milk and of nearly raw flesh by the natives.

On the other hand, the Hebrews are exceptionally free from

tuberculosis, as we all know, and they exercise the greatest care in the inspection of the meat they consume. The lungs of all the animals destined for their food are examined, and in all cases where they cannot be fully inflated, or where there are adhesions of the pleura, the animals are rejected.

What are the conclusions we are almost forced to draw from these facts ?

I need hardly state here that tuberculosis in the bovine race, once known as the " pearl disease," is now universally regarded as being identical with the tubercular disease in man. Not only are the bacilli in the two cases indistinguishable under the microscope, but their growth in various culture media and their other biological characteristics are identical. The latest scientific evidence I have observed on this point is this : Dr. Woodhead and Prof. McFadyean last year examined six hundred cows in the Edinburgh dairies. Among other results of their investigations, Dr. Woodhead states that he found as great difference in size between the bacilli under the same cover-glass, from sputum of a tuberculosis patient, as he had found between bacilli taken from a cow and from a human subject, and he concluded that any differences there might be between the size, mode of growth, or position in the tissues of human and bovine tubercle bacilli was not sufficient to constitute a specific difference.

From our present degree of knowledge of comparative physiology, should we not naturally conclude that any parasite finding a favorable soil for its development in the cow or other domestic animal would find the soil of the human organism about equally favorable ; and *vice versâ ?* The bacilli all appear to be very tenacious of life, and a difference of two or three degrees in the temperature of the different organic fluids they would doubtless readily reconcile themselves to, and likewise to any other such slight physiological or chemical differences existing between the internal structure or condition of the human body and that of these lower animals.

There is a large amount of the most conclusive evidence that the disease is communicable from man to the domestic animals. Besides a great many instances of observation, in which it was

plain that poultry had contracted well-marked tuberculosis from eating the sputa from the human lungs, the bacillus from human sputa has been, time and again, cultivated and inoculated into various animals, with the result of giving rise in them to unmistakable tubercular lesions. Bollinger, one of the first German authorities, has inoculated tuberculous matter obtained from man into the dog and produced typical miliary tuberculosis of the pleura, lungs, liver and spleen; and a great many experiments of a like character are upon record. But I will not dwell upon this settled point.

In the last number (March 2nd) of that conservative and cautious organ, the *New York Medical Journal*, the editor, Dr. Frank P. Foster, in an editorial on this very subject, says:— Fowls have become infected by the sputa of tubercular patients, and hogs by the milk of cows in which there was tubercular disease of the udder and teats; the transmission of pulmonary tuberculosis in man from one individual to another is undoubted, and, unless the bacillus tuberculosis is greatly modified in its passage through the lower animals, the danger of infection travelling from animals to man would seem to be very great.

Many classes of the feathered race, I may here observe, are very prone to this disease; especially the common fowl, pigeon, partridge and other grain-eating birds. Dr. T. W. Mills, Professor of Physiology, McGill University, at the last December meeting of the Montreal Medico-Chirurgical Society, exhibited specimens from a tuberculous pigeon, a white Jacobin, bred by himself, which had died two days previously. The bird had been ill only three weeks, and was fairly well-nourished at death. The tubercles were very widely distributed, the organs inflamed, and bound together by recent adhesions. Owing to enlargement of the organs and pressure, the apex of the heart was squeezed to such an extent that it must have become functionless. Dr. Mills stated that no doubt many birds offered for sale on the market were subjects of tuberculosis.

Now it may be argued that there is no direct proof of the transmission of tubercle from animals to man by the consumption of flesh and milk. "Such proof, it need scarcely be said,"

argues Prof. Walley of the Royal Veterinary College, Edinburgh, "cannot for manifest reasons be obtained, but the mass of indirect proof in favor of such supposition is enormous." But, he adds, very recently a most striking example of the effects of consuming the flesh of a tuberculous animal has been brought to light by a French physician in the case of a young woman who rapidly became consumptive as the result of eating the imperfectly cooked bodies of tuberculous fowls.

The flesh of tuberculous animals has evidently been suspected as dangerous from the earliest records. On the authority of Lydtin, Fleming, and Van Hertzen, there existed in the Mosaic laws strict legislative rules condemnatory of the flesh of an animal affected with this disease. The laws embodied in the "Mischna" (the oldest part of the Talmud) distinctly refer to the prohibition of the use of such flesh. From that time onwards various ordinances have been instituted with the object of checking the use of consumptive flesh, especially in France and the German States, and even in Spain, Italy and Switzerland; and severe punishment has at different times been inflicted upon butchers and others who have wilfully sold such flesh for human food.

That the milk of tuberculous cows is dangerous there is more conclusive evidence than that the flesh is dangerous. Long before Koch's discovery of the tubercle bacillus it had been accidentally and experimentally demonstrated that milk was infective by ingestion to calves and other young animals; and, as Prof. Walley observes, there is a mass of evidence in favor of the view that by this vehicle the germs of the disease are conveyed from the cow to the human subject. The question of the infection of tuberculosis being conveyed by milk is of greater importance than is infection by flesh; for the two-fold reason that the former is so largely consumed by infants, and generally in an uncooked state. The danger of contamination by milk will be more clearly comprehended when it is known that the tubercle bacillus can be readily detected in the lactiferous product of animals in whose udders tubercular lesions exist; and also, as has been shown by Professor Bang of Capenhagen, in the milk of women in whose

breasts the disease existed. Of the six hundred cows examined by Dr. Woodhead and Prof. McFadyean, already referred to, in six cases they demonstrated the presence of tubercle bacilli in the milk.

Prominent physicians both on this continent and in Europe maintain that tuberculosis is often imparted to human subjects by milk from diseased cows; and Prof. Bollinger, in a paper read not long ago in Munich, has sustained their position. He said that repeated experiments show that the milk of tuberculous beasts has a very decided contagious influence, and its noxious properties cannot always be expelled by boiling. The professor enjoined upon farmers the necessity of taking the strictest care of their stock, and upon people generally, the greatest care as to the quality of milk they use. Prof. D. E. Salmon, of the U.S. Bureau of Animal Industry, declares his belief that tuberculous milk is an exceedingly prolific source of consumption in the human family, and says there are clinical observations proving the transmission of tuberculosis from animals to man through the use of this fluid.

But let us come to something more definite. Prof. Walley says: "In 1872 I lost a child in Edinburgh under circumstances which allowed but of one explanation, viz., that he had contracted mesenteric tuberculosis through the medium of milk." A Mr. Cox, of the Army Veterinary Department, Eng., has related the particulars of a case which led to the same conclusion; as also has Mr. Hopkins, F.R.C.V.S., of Manchester. Fleming has referred to a similar case as occurring in the child of a surgeon in the United States; and a short time ago, says Walley, a case of mesenteric tuberculosis by the imbibition of milk occurred in the child of a well known veterinary officer of the Privy Council. At a meeting of the Edinburgh Medico-Chirurgical Society, held last year, Dr. Woodhead referred to some undoubted cases of transmission to man and the pig by the medium of milk.

A few years ago, in a paper bearing upon this subject which I had the privilege of reading before the Toronto Medical Society, I mentioned the two following cases, which had then but just

been recorded in the *U.S. National Health Bulletin:* One by Mr. J. Shaw, Veterinary Surgeon and Prof. of Vet. Med. in Cornell University, in which a family cow, in Brooklyn, U.S., was found in an advanced state of tuberculosis, and the owner, one William Martin, and his wife were rapidly sinking under the same malady; in the other case, reported by Dr. Corlies of New Jersey, a family cow, supposed to be suffering from lung plague, was found to be afflicted with tuberculosis instead, and the owner's wife, who had been making free use of the milk warm from the cow, was suffering from the same disease, but was persuaded to give up the use of the milk, when she underwent an immediate and decided improvement.

A more striking case than any one of these was recorded in the *Medical Press and Circular* a few months ago, by Denune of Berne, the details of which are as follows: An infant, aged four months, belonging to a family whose history was absolutely negative in regard to tubercular affections, died of tuberculosis of the mesenteric glands, a fact confirmed by a post-mortem examination. The glands alone contained the bacilli; or at least none could be found in any other part of the body. The child had been fed with the milk of a cow which was kept for the special purpose, and, for the purpose of enquiry, the animal was killed and examined. The left lung and pleura were found to be studded with tubercle, in which the bacilli were easily detected. The milk first drawn yielded but negative results bacteriologically, but the bacilli were found in portions of this fluid expressed from the deep parts of the mammary glands.

The journal alluded to regards this case as important from another point of view: as if, instead of a human infant, a calf had consumed the milk from its mother's udder, it would in all probability have become tuberculous, and the case would have been regarded as one of hereditary transmission.

According to Prof. Bang and others, the cream and butter, and also the buttermilk, from tuberculous cows, has been shown to be as infective as the milk, if not more so. This is of the most serious importance of all; for although the milk and flesh can doubtless be so cooked as to be rendered safe, it is not so practicable to cook cream and butter.

Now it becomes a question,—is the disease in Canada so prevalent among cows or other animals as to create alarm or uneasiness? I should say at once, although not very prevalent, it is sufficiently so, in view of all the facts which I have brought before you to-night, with others yet to be noted, to give rise to much uneasiness, and, indeed, to more than this, if some decided action be not soon taken with a view of lessening the danger,—as by a system of inspection of both cows and beef, and of the education of the farming community in relation to the whole subject. I think I can bring before you evidence which would convince anyone, that now is the time to take some action in order to avoid or prevent much more serious consequences in the near future.

I will first say a few words relating to the early symptoms of the disease in cows. A peculiarity of the disease, which much increases our difficulty in deciding upon the point now under consideration, and which must not be overlooked, is the obscurity of the early symptoms. As Prof. Walley says: Under certain circumstances animals may become extensively diseased, and yet no suspicion of the fact be aroused in the minds of the owners of, or the attendants upon, such animals.

According to Fleming, the first perceptible signs are general dullness and indifference, and less activity and energy; with heightened sensibility of the skin, especially over the withers, back and loins, manifested by marked shrinking of the animal if these parts be pinched. There is exaggerated sexual desire, marked by continual or frequent periods of rutting: such animals being known as "bullers" (in France, as *taurelières*). They rarely breed, however, though they may now fatten or yield as much milk as if quite well. The milk is more watery, of a bluish tint, and less rich in nitrogenous matters, fat and sugar, but containing a larger proportion of alkaline salts. There is a dry, deep, though feeble cough, especially on exertion of the animal or on sudden change of temperature of the atmosphere, or on compression of the windpipe. There is not generally expectoration or nasal discharge, though at a later period exertion causes a flow of glairy mucus streaked with thick flakes. The

walls of the chest become more sensitive on percussion, or thumping, and there is a duller sound. By placing the ear on the chest one may often hear, instead of the smooth respiratory murmur of air passing in and out the lungs, as in health, a harsh, rasping or loud blowing sound, especially in some parts of the lungs. The heart's action is at times quicker and stronger; the skin, particularly toward the base of the horns and ears, is hot and dry; intermittent bleeding from the nose may take place; lameness, too, and enlargement of the glands about the neck and elsewhere.

The above symptoms may continue, with little change, for months, but if no preventive or curative measures be adopted, the symptoms become intensified, and what is called the second stage of the disease is reached, and finally the third stage, with weak digestion, diarrhœa, emaciation, etc., but the symptoms of which I need not here detail.

Veterinary-Surgeon Grissonnanche, at the Paris Congress on Tuberculosis, in July, stated that the disease is characterized from the first by tumefaction of the pharyngeal glands, irregular inspiratory movements, a harsh friction sound on auscultation, with a short cough not easily provoked except by sharp percussion on the thoracic parietes, a procedure evidently causing pain to the animal.

Veyssiere, at the same congress, said that he had seized a very fat and apparently well-conditioned cow on account of symptoms of a local tuberculosis, and a post-mortem examination revealed tubercular lesions in the lungs and liver. He had injected some of the expressed juice of the meat of this cow into two rabbits and both animals had died. Guinard said he had seen a lady patient drinking the fresh blood from a fine appearing animal, which was afterwards found to be tuberculous and was condemned. You will remember that the pigeon submitted by Prof. Mills was fairly well nourished when it died. Indeed, it is now generally well known that cows in good condition, appearing to the ordinary observer to be in good health, and which continue to give abundance of milk, may be the subjects of extensive tubercular deposits in different parts of the body.

From these facts it seems clear that the disease may be more common in any locality or country than would be apparent to the public or to any ordinary observer. Then it must be borne in mind, in considering the question of the frequency of cases, that if cows were allowed to die naturally, as human beings are virtually allowed to die, the proportion or number of cows succumbing to the disease would in all probability be much greater. Many farmers, too, on the first symptoms or signs of any failure in the health of his animal, will, from self interest, almost instinctively, at once sell it to the butcher.

Before bringing evidence before you as to the degree of prevalency of the disease in Canada, allow me to briefly quote authorities as to its prevalency in other countries.

Dr. Heath, Pres. American Farmer's Club, some time ago (in *Lond. Med. Rec.*) stated that "This disease prevails extensively among such animals all over the world, and especially in populous and crowded localities. Observations in Mexico have led to the conclusion that 34 per cent. of all beasts slaughtered there were more or less affected with this disease. and probably 50 per cent. of the cows kept in large towns were thus diseased. The fact that this is not more generally recognized is, of course, owing to the animals being slaughtered before the disorder has attained any very noticeable development."

Mr. Salmon, Chief of the Washington Bureau of Animal Industry, at the last November meeting of the A.P.H.A., declared that, from "an inspection of about half a million" cattle, the "widespread prevalence of the disease is certain." In the second and, I think, last report of the Maine State Board of Health is given in detail the history of the destruction by this disease of two very valuable herds within the past two years: one, the Orono herd, in Maine; the other, that of the Willard Asylum Farm, New York. At a recent meeting of the Butchers' Association in California, the agent there of the Bureau of Animal Industry spoke strongly of the prevalence of the disease—of the "rottenness" of the cattle—there, and the great danger to the public health therefrom. At the last meeting of the British Medical Association, Dr. Alfred Carpenter said it had been his

duty to hear evidence when application was made for the condemnation of tuberculous carcases, and that if all such meat were prohibited it would be impossible to feed such a population as that of London. One of the principal inspectors of the largest meat market in London, he said, stated in the evidence that sometimes as much as 80 per cent. of the meat on sale was so affected. At this same meeting, Dr. Farquharson, M.P., after discussing the subject, said, "under these alarming circumstances, he held it was the duty of the government to deal seriously with it."

About two years ago I sent out questions to a large number of veterinary surgeons throughout Ontario, with the special object of finding out the facts as to the frequency or otherwise of cases of the disease in this province. I received a good many replies, although not so many as I had hoped for. Collectively, these went to show that in the opinion of the writers the disease was not very common, but that on the whole there were a good many cases of it. Some of the respondents mentioned recent cases observed, while others wrote that although few cases had come under their own observation, other veterinary surgeons, they were informed, had observed many cases. One wrote, in effect, that he had reason to believe the disease common, but that stock owners wished to keep it quiet: and he expressed the wish that his name should not be publicly mentioned in connection with this information. At the opening of the Montreal Veterinary College in October, 1887, Dr. R. P. Howard, Dean of McGill Medical Faculty, in the chair, Mr. McEachran, Chief Veterinary Surgeon of the Dominion, said: "The communicability of tuberculosis from animals to man has been proven beyond a doubt. . . . The insidiousness of this disease makes it difficult to arouse the people to its danger. The milk supply is often tested by public analysts and police inspectors to prevent its adulteration by water, but no effort is made to prove the absence of diseased germs in the nutrient fluid which forms the chief diet of infants and invalids. . . . He was aware that this disease was on the increase among cattle in Canada as elsewhere." In the ninth annual report of the Agricultural College and Experimental

Farm, Guelph, Ontario, it is stated that "the extent to which this disease exists amongst the better breed of cattle in this country is alarming, for many reasons; not the least one of which is the danger to which the public are exposed from the consumption of meat from such animals. From an economic standpoint the outlook is serious, as the annual loss must be very great, and will continue to become greater as long as so little care is observed in the selection of healthy dams and sires."

Evidently the belief that heredity is an important factor in causing the disease still retains its hold upon veterinary surgeons to a much greater extent than upon the medical profession.

The President of the New Brunswick Medical Society, Dr. P. R. Inches, at the late annual meeting of the society, after alluding to a number of outbreaks of the disease, and to the danger to the public health therefrom, said: "Since writing the foregoing, I have learned from a reliable source of the existence of the disease in this neighborhood. Cases are met with not unfrequently, and it is only a few days ago that the termination of one of those cases took place. The animal, a Jersey cow, had been ailing for quite a time, and was examined by a leading veterinary surgeon, who diagnosed the case as one of tubercle." The animal was isolated, quarantined, and kept under observation. After death an examination took place, which verified the diagnosis in every particular. The case was reported to the Department of Agriculture. The veterinary surgeon tells me, said Dr. Inches, that such cases are not rare, and that the milk of such animals is used and no doubt their flesh often eaten. His last remark to me was "that the medical profession will wake up some day to the importance of such cases of infectious disease and insist upon measures to prevent its propagation.

Now, from the foregoing facts, and from others so well known that I have not here alluded to them, the whole question may be summed up, and the conclusions which may be reasonably drawn therefrom are briefly as follows:—

1. That, as it has been long known that glanders and hydrophobia may be communicated from animals to man, and it has been clearly demonstrated that tuberculosis may be communi-

cated from animal to animal, from man to man, and from man to animals; that the bacillus of tubercle, invariably found in all tuberculous matter, is in animals, so far as can be ascertained by the microscope, by their action in different culture media and their other biological characteristics, identical in every respect with the bacillus in the tuberculous matter in man; that many of the more highly organized parasites, such as tapeworm, trichina and other forms, are common alike to both man and animals; that there are no known differences, physiological or chemical, between the constituents and structure of the various parts of the human body and those of the domestic animals such as would lead to the conclusion that any parasitic organism which finds suitable conditions for its development in the latter would not find equally suitable conditions in the former; that it appears that where cows are not to be found, tuberculosis is not common or is quite unknown, and that many observers and investigators in both Europe and America declare that wherever the disease is prevalent amongst cows it is proportionately prevalent amongst the human population; and, finally, that many cases of tuberculosis in human beings are upon record in which tuberculous milk had been consumed as food, and as no other cause could be assigned, there was the strongest presumptive evidence that the milk was the source of the disease, it would therefore, for these reasons, appear to be in a high degree unreasonable for us to refuse to receive as a fact the extreme probability, at least, that this disease may be, and not infrequently is, conveyed to the human body by the meat, milk and butter of tuberculous cows.

2. That although cases of tuberculous disease in cows are not known to be common in Canada, it must be remembered that, from the attention of the public not having been specially drawn to the subject, the disease has not been suspected or looked for; that there is abundant evidence that the disease is prevalent in many parts of the adjoining States, many entire herds there having been destroyed by it, while one of the inspectors of the largest meat markets in London, Eng., in evidence before Dr. Carpenter, has declared that sometimes as much as 80 per cent. of the meat examined there was tuberculous; that a report of

the Experimental Farm at Guelph, Ontario, states that the extent to which this disease exists amongst the better breed of cattle in this country is alarming, and the chief veterinary surgeon of the Dominion, Mr. McEachran, states that the disease is on the increase among cattle in Canada, as elsewhere, while other veterinary surgeons say it is not rare amongst us, and at least one entire herd in Nova Scotia has been destroyed by it; that the insidious nature of the disease causes it to be often overlooked, and makes it difficult to arouse the public to its occurrence and danger; that, according to the best authorities, cows may be tuberculous in a marked degree and yet continue to thrive and give abundance ef milk containing the tubercle bacilli, and yet the disease not be suspected by the owner or attendant; that as cows are not allowed to die naturally, but are slaughtered for the market, and doubtless in some cases tuberculous cattle are thus disposed of before the disease has attained noticeable development, and that even in the recognized early symptoms of the disease in individual cases such cattle would doubtless, as a rule, be sold by the owners to the butcher in order to prevent loss; and, finally, that in Canada there is no system of inspection either of live animals or of slaughtered carcases by which the proportion of cases of the disease might be estimated; it is therefore possible, and even probable, that cases of tuberculosis in cows are of much more frequent occurrence in this country than may seem at present to be the case, and that tuberculous meat, milk and butter may now be sometimes sold in the market and be a cause of tuberculosis or consumption in the human organism.

3. That this disease is well known to be infectious; that it is the rule with infectious diseases that, when no special means is employed to prevent their spread, cases will become more and more frequent, and in a constantly increasing ratio,—one case giving rise to two, three or four cases, and these, again, giving rise to probably four, nine or sixteen other cases, and it is to be feared that if some preventive means be not used the disease may, and is likely to, soon become as prevalent amongst cows in Canada as in any other country; and that, therefore, it is

most desirable, and in the interests not only of the public health but of all stock growers and dairymen, that measures be taken at the earliest possible time with the view of preventing, while it is yet the easier to do so, the spread and increase of the disease.

[Since writing my recent paper on the Intercommunicability of Tuberculosis, I have observed in the *British Medical Journal* of March 16, 1889, that at the International Medical Congress of Australia, held in January last, Dr. McLaurin, President of the Board of Health of Sydney, in an address, gave the following important evidence in relation to the probability of tuberculosis being communicable from animals to man: After stating that the mortality from consumption in the cities there was 2·39 per 1,000 of the population per annum (a very high rate), said: "Consumption has got a footing amongst us and is now one of our most impotant causes of death. There is a good deal of trafficking in tuberculous cattle in New South Wales, for both slaughtering and dairy purposes. A law is urgently required making it penal to traffic in diseased animals. Among the Jewish population of New South Wales, numbering 4,000 persons, in three years there was but one death from consumption. Taking the average of that colony, the expected deaths in the 4,000 persons would have been 13.68; and as the Jews live chiefly in the cities we might expect the mortality to be higher. The result is largely due to the avoidance of tuberculous meat."

E. P.]

—Macewen, of Glasgow, has introduced a new method of dealing with aneurisms. He inserts a needle into the wall of the sac sufficiently far to reach the opposite side, and then makes a number of fine scratches on the inner surface of the endothelium. This procedure is quickly followed by a proliferation of leucocytes and the subsequent development of a "white thrombus." This thrombus is found to be much firmer than red clot and is free from the dangers of embolism.

Retrospect Department.

REPORT ON DISEASES OF CHILDREN.

By A. D. Blackader, B.A., M.D.,
Instructor in Diseases of Children, McGill University; Assistant Physician, Montreal General Hospital.

ON THE NATURE OF DIPHTHERIA.

In a very interesting clinical lecture (*Rev. Mens. des Maladies de l'Enf.*, Feb. 1889) Dr. Jules Simon places before us the result of the investigations of MM. Roux and Yersin, which have been lately conducted in Pasteur's laborotory. "Since the time of Bretonneau," he says, "diphtheria has been regarded as a specific disease, contagious and infectious, characterized by the presence of special false membranes and well-defined physical signs, of which the fauces are generally the initial seat, but which have a strong tendency to invade the air passages, and directly produce asphyxia. In regard to the glandular complications, which almost always accompany these lesions, the question has arisen as to whether they are of the nature of an inflammatory extension, or whether they are in all cases the first degree of an intoxication which sometimes becomes the chief malady and carries off the patient in a state of profound prostration without any evidence of interference with the respiratory function." . . . "To-day I do not hesitate to say that doubt is no longer permissible on these points of etiology; and the time has arrived to add to our definition of diphtheria the necessary presence of a bacillus capable of reproducing itself under culture, and of transmitting the disease to animals by inoculation. Since 1868 many investigators have made out the presence of various micrococci in the false membranes of those affected with it, but Senator and Schweninger have proved that all of these exist normally in the upper part of the digestive tract. More lately Talamon obtained a bacterium from the membranes and succeeded in reproducing membranes from cultures of it, but there seems to have been much want of uniformity in his results. The important work published in 1888 in *Les Archives du Laboratorie de M. Pasteur* by MM. Roux and

Yersin has, however, demonstrated that Talamon's microbe must yield the field to that of Klebs and Loeffler. The existence of this special bacillus in the membranes was first demonstrated by Klebs in 1883 at the Wiesbaden Congress, where he fully described it. Since then Loeffler has also succeeded in making pure cultures from it, and reproduciug from these diphtheritic membranes in pigeons, chickens, rabbits and guineapigs. He himself, however, remained somewhat uncertain of the correctness of the results since he had not found the bacillus in these reproduced cases typical of diphtheria, and especially since he had not observed any paralyses in such animals as survived the experiments. Rut MM. Roux and Yersin have not only found the bacillus of Klebs and Loeffler in all the cases of diphtheria observed by them, and with pure cultures from this reproduced the diphtheritic membranes in the animals inoculated, but, a fact of great importance, they have succeeded in producing paralysis analogous to the diphtheritic paralysis observed in man. They have demonstrated that the liquid of these cultures, filtered and deprived of its microbes, contains a poison which in injections more or less strong either kills the animals or produces in them certain paralyses. From experiments it appears that mere contact of a diptheritic product with a clean and healthy mucous membrane is not sufficient for inoculation. It is not sufficient to paint a healthy mucous membrane with a pure culture of this bacillus of Klebs; the mucous membrane must first be irritated or abraded for the inoculation to take effect. Loeffler used a platinum needle charged with the culture. It would seem established that a healthy mucous membrane opposes an obstacle to the entry of the diphtheritic poison, temporarily effective, but easily rendered insecure—as a slight sore throat, even the most simple, produced by cold, suffices to permit the entrance of the contagium. The frequency of diphtheria after sore throats from measles, scarlet fever, and illnesses which leave behind them an altered condition of the mucous membrane of the upper respiratory passages has for a long tlme indicated the same fact."

"Since Trousseau, cases of diphtheria have been divided into three classes of increasing gravity—(1) local; (2) infectious;

(3) toxic. Local diphtheria has been characterized by the existence of membranes having only a feeble tendency to propagate themselves, having only indefinite specific qualities, and no toxic properties. My experience, gentlemen, bought in the commencement by more than one painful surprise, forces me to warn you that all membranous sore throats are of the nature of diphtheria, and although local at the first, may become systemic, general, and infectious, or even toxic. I will go further. I will say that every catarrhal, herpetic, or pultaceous sore throat may in the end terminate in some catastrophe of this sort, and that the greatest reserve ought to be the rule in your prognosis when you have to pronounce on the course of any exudations formed in the throat of an infant that you have been asked to examine on account of trouble there."

Dr. Simon records several examples which occurred in his practice when the affection seemed of the lightest character in its commencement, but rapidly became severe and fatal. He then goes on to say : " Have we, in these cases we have just cited, a purely local diphtheria, or are there any cases which can be considered absolutely benign ? Facts oppose themselves to such a view, and the experiments of MM. Roux and Yersin confirm our doubts, for diphtheritic membranes, whatever may be their origin, have furnished the same microbe, which, when brought by successive cultivations to a state of purity, has constantly produced true diphtheria, and at the same time the liquid of these cultures, when separated by filtration from its micro-organism, has always produced definite symptoms indicative of a toxæmia, resulting fatally when the injection was made in sufficiently strong doses and under favorable conditions. They report having seen death occur in rabbits, and especially in guineapigs, within forty-eight hours after an injection of 35 c.c. of a culture liquid, from which the bacilli have been separated by a careful filtration. . . . . Adenitis occurred in the gland next the point of injection, followed by induration of the surrounding cellular tissue. No special bacilli after death were able to be discovered either in the blood or in the several organs. It is evident from these experiments that the bacillus of Klebs

elaborates in the culture liquid, a most violent poison. And it seems probable that it is this poison, produced suddenly, in considerable quantity, which brings about in these toxic cases of diphtheria such intense and sudden prostration and rapid death. Certain it is, that all the animals submitted to the injections of this liquid, filtered and freed from all its microbes, remind us, by their prostrate attitude, and paralysis of their respiratory muscles, of the sad picture of the death of such as are struck down by toxic diphtheria. . . . Such facts should influence our mode of combatting this disease; our efforts should be directed (1) to check the development of these membranes, (2) to remove those that are already formed, and (3), with all, to support the general system."

"Certain facts connected with the special hygiene of this disease have been determined by the experiments of these gentlemen. M. Roux states that the cultures of this microbe preserve their pathogenic powers in closely-sealed tubes for more than five months; and that even when these powers are diminished by the lapse of time, they are able to be revived with a new intensity under the influence of a new culture. The virulence of the soluble poison is, however, strongest in the older cultures, but appears to lose its strength under the influence of air and light. The possibility of reproducing, after a long time, diphtheritic membranes and all the dread symptoms of diphtheria with a revived culture of the microbe is in entire conformity with the facts of evidently new contagion, after a long time, in a place where previous cases of diphtheria had occurred. Let us also never forget that, with the exception of the slight barrier opposed by an intact mucous membrane, there is no safeguard for those around against the invasion of the microbe; and translate that conviction by such prescriptions and strict orders that, even if not carried out, may at least place your conscience at rest."

"It seems impossible to close without expressing, though with much reserve, a thought that touches closely on the prophylaxis of diphtheria. M. Roux, after relating some different circumstances under which the poison appeared to be weakened, asks if it is possible to accustom the animal to this poison, and to

produce in them an immunity against the disease. He announces that he will shortly publish an article on this important subject."

On the same subject Dr. Bk. Bachford (*Med. News*, Feb. 2, 1889), in a paper before the Cincinnati Academy of Medicine, writes: "From what has been said, it is evident that our medical knowledge at the present time points strongly to the conclusion that the constitutional symptoms of diphtheria, including the after paralysis, are produced either directly or indirectly by ptomaines. Are these ptomaines formed inside the body or at the seat of the local lesion? . . . . All recent writers on this subject agree with Dr. Jacobi in accrediting the local lesion with causing, in part, the septic symptoms and greatly increasing the dangers of the disease." The writer then compares the symptoms of tonsillar and nasal diphtheria—the slight constitutional symptoms in the one and the severe character of them in the other, though both afford equal facility for the microbes to enter the system. He then goes on to say: "Dr. Jacobi says that on the thorough irrigation and disinfection of the nasal cavities hangs every life in nasal diphtheria; and just in proportion to the thoroughness and frequency of the washing of the local lesions, the fever, the septic symptoms, and the cervical lymphangitis are abated. The explanation for this is apparent to the merest novice in medicine, viz., the parts are so cleansed of the poisonous material which, on absorption, are causing the constitutional symptoms that only the minimum amount of this material is left behind to be taken up by the thirsty lymphatics and blood-vessels of this very vascular part, probably of all surfaces in or on the body the best adapted for absorption. If diphtheria is even a constitutional malady, it is so in just this form we are describing, and yet we have in this extract from its clinical history the most direct testimony that it is purely local. . . . That the profound constitutional symptoms are not produced by the diphtheritic germs growing and multiplying in the blood or tissues of the child is amply proven by the fact that these symptoms are abated by treating the local lesion. For if the diphtheritic germs found entrance into the body, and could grow and multiply there to the extent of producing the deep septic symptoms of that

disease, as well might we hope to influence the constitutional symptoms of syphilis by washing the chancre, as to hope to influence the symptoms of diphtheria by washing the gateway by which these germs entered. . . . That the deep glandular enlargement is not due to the migration of diphtheritic germs along the lymphatics is in like manner amply proven by the fact that this enlargement begins to disappear with the thorough irrigation and disinfection of the nasal mucous membrane. If the germs migrated to the lymphatic glands and there produced irritation by their development, then the glands themselves would be the site of an active diphtheritic process; and the disease would continue whether the source of the contagion were removed or not. On the other hand, if the glandular enlargement be due to irritation of chemical products taken up by the lymphatics from the seat of disease, then this enlargement would abate when the surface of absorption was kept clean. . . . . The fact that this explanation is supported by clinical observation is very strong testimony in proof of the strictly local origin of diphtheria, for if the diphtheritic germs ever thrive in any part at all removed from the local lesion, and within the tissue of the animal, it must be in the neighboring lymphatic glands. The occasional long-continued or permanent enlargement of the lymphatics following diphtheria can be readily explained by allowing that diphtheria, like other local diseases and injuries, may awaken in the glands a latent tuberculosis or syphilis, which remains as an active disease after the diphtheria has passed away. This lymphatic disease would in turn cause a chronic irritation or congestion of the mucous membrane of the nose and throat, which by reason of the fact that it furnishes a favorable soil would predispose to a second attack. . . . The number of second and third attacks is so small in proportion to the number of first attacks that they can readily be accounted for in this way. Further than this, it is my belief that one attack of diphtheria not only does not predispose to other attacks, except in the way mentioned, but, on the contrary, gives temporary immunity in proportion to the severity of its constitutional symptoms." He then discusses the question of diphtheria being due to an internal parasite, and

concludes that all the evidence is against it being such, but adds, "The rarity with which the diphtheritic exudation is found in the stomach and intestines would indicate that some pathological change in these parts is necessary to furnish the condition requisite for the growth of the germs. These conditions must be such as will furnish it with oxygen either in a free state or in such unstable combination that it can be utilized by the germ in its growth. Such an unstable compound we have in the very hæmoglobin of the blood. A congested and eroded mucous membrane might serve to bring the germ in contact with this body." In conclusion he summarises as follows: "Diphtheria is a purely local disease, caused by an external parasite which is practically if not strictly aerobic. The constitutional symptoms are due to the absorption of poisonous materials, viz, ptomaines from the local lesion, to which are to be attributed the changes occurring in the blood and tissues, including the nerve lesions. The disease has no latent stages, and second and third attacks are due to re-infection. One attack, as a rule, gives at least temporary immunity. After this limited period of immunity has expired, the previous attack may act as a predisposing cause to other attacks if it has left the mucous membrane of the throat in an irritated and inflamed condition. This is more likely to occur in scrofulous subjects. Complications may occur from the entrance into the body of septic germs." From these conclusions he formulates the following rules of treatment:—

1. Dissolve away the membrane if possible, and irrigate thoroughly and frequently the local lesion with an antiseptic solution.

2. Where practicable, follow the irrigation with a dressing which will exclude the atmospheric air.

3. Endeavor to eliminate the poisonous alkaloids from the system by mild catharsis.

4. Endeavor to counteract the toxic effects of the poison on the heart and tissues by administration of stimulants, and on blood by free exhibition of iron.

5. Chronic glandular enlargement, or local disease in or about the throat, a sequel to diphtheria, should receive careful treatment to prevent recurrence of the disease.

6. The patient should be under observation for at least two months after an attack, and an effort be made with tonics and judicious feeding to restore blood and tissues to normal state that they may resist the degenerative nerve changes which cause the after paralysis.

7. A serious exacerbation of the symptoms in any form of ulceration or catarrh of the stomach or intestines occurring in a patient exposed to the diphtheritic poison should lead us to suspect diphtheria of these parts, and to treat the case accordingly.

QUARTERLY RETROSPECT OF GYNÆCOLOGY.

PREPARED BY T. JOHNSON-ALLOWAY, M.D.,
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At a recent meeting of the British Gynæcological Society, Mr. Lawson Tait brought forward some very interesting cases. One of tubal pregnancy with the following history: Recent recovery from an attack of ovaritis. She was 28 years of age, married nine years, three children, last one ten months ago. She had been ill ten months, losing a great deal of blood, with pain in lower part of abdomen. A large cystic mass could be felt in the pelvis, rising three inches above the brim. He considered it a case of suppuration, and therefore opened the abdomen. Instead of this, however, it turned out to be one of tubal pregnancy of left side, which had ruptured into the broad ligament and caused the appearance of a large blood-clot between its layers. There was evidence of recent bleeding into the cavity of sac, which would not have been controlled by any other method than ligature of the broad ligament. The patient did well.

Another case was one having a history of recurrent attacks of peritonitis. She had been married nine years, no children. He diagnosed pyosalpinx. The operation showed it to be a case of double pyosalpinx, the recurrent rupture of which had caused the repeated attacks of peritonitis. Patient recovered.

The next case was one of those very rare extra-peritoneal cysts occurring in a child 14 years of age. Mr. Tait had, at first, taken it for a parovarian cyst, but on opening the abdomen

he found it to be one of those extra-peritoneal cysts lined with the usual amniotic-looking membrane. He scraped the wall, washed out the cavity, and then filled it with water, hermetically closing the wound. The high temperature at once subsided and there had been no appearance of the sac refilling. Mr. Tait considered this a very satisfactory way of treating these cases. If the sac refilled, he would tap it and inject iodine. In future, he would do this at the time of the operation.

The next case was of a similar nature. The symptoms were very acute. The patient was a woman of 21 years, and was very ill. Mr. Tait recognized the condition and operated at once. In this case he also found the two Fallopian tubes greatly distended, covered with granulations, and full of a cheesy material, being the second case in which he had met with tubercular disease of the tubes occurring in the cysts. Mr. Tait states that the proofs of the morbid material being tubercular, were incontestable, though no bacilli were found—a point to which Mr. Tait does not attach much importance. The patient recovered.

Mr. Tait has lately written upon the influence of removal of the uterus and its appendages on the sexual appetite. He states that recent events have drawn much attention to this subject, and the strongly contradictory evidence given in a court of law has given it a prominence which otherwise it hardly deserved. Mr. Tait scornfully repudiates some of the erroneous beliefs on this subject. For instance, that because of the removal of both testicles in a man he is therefore not only deprived of the power of impregnating a woman, but also of engaging in sexual intercourse. This condition was based on false analogy, and was not substantiated by facts. The evidence supplied by the lower animals goes to show that the power of engaging in the sexual act is not destroyed by removing the testicles after puberty, although the females seem to know, probably by the sense of smell, that such an animal is imperfect, and they will not permit his approach. Mr. Tait relates some very interesting facts in regard to this question. For instance, before he had been able to find a report of a case where both testicles had been removed

in a man, he was greatly importuned by a clergyman to remove both of his testicles with the object of destroying some troublesome symptoms from which that gentleman suffered, but as he did not feel justified in expecting any satisfactory result from the operation he declined to undertake it. But lately, however, by accident he had had such a case brought under his notice. A gentleman of 47 years of age first had one testicle removed at the age of 19, then married, and at the age of 39 had the remaining testicle removed. The patient stated that through fear of failure he did not for some months afterwards attempt sexual intercourse with his wife, but gradually his old habits were resumed, and now he has intercourse as frequently and as satisfactorily as when first married.

Regarding oöphorectomy, Mr. Tait says that he does not think the ovaries have any more to do with the sexual appetite than the front teeth ; and that he has arrived at this conclusion from close inquiries in cases ranging in age from 17 to 60 years.

Mr. Tait also gives three cases where hysterectomy was performed before marriage, and that the operation had no injurious effect upon the patient in this respect.

During the discussion on Mr. Tait's paper, he was universally supported in his views that the ovaries and uterus had nothing whatever to do with the sexual feeling, and that, as Dr. Routh said, it took its origin in the genito-spinal centre of Büdge.

Notes of a Case of Uterine Fibroid treated by Electricity, by H. T. Rutherford, M.D.—This was a case of uterine fibroma treated by Apostoli's method. The patient had received three intra-uterine applications of the galvanic current, the negative pole in the uterus. The intensity at each application was respectively 120, 100 and 110 mill., each application lasting from ten to fifteen minutes. There was not much pain experienced after each application, but the temperature became elevated (100°F.) On the second day following the last application the patient experienced a decided chill followed by an elevation of temperature to 104.2°F. Then followed a distinct attack of localized peritonitis. During the following four or five weeks the patient remained in a very serious condition—high tempera-

ture, rapid pulse, and emaciation. During this time symptoms of septicæmia were present. The axillary glands became swollen and painful. Shortly after this the symptoms of sepsis gradually disappeared and she began to improve; the improvement lasted only for a few days however, when rigors, sweats and high temperature again set in. Phlebitis of right arm caused a good deal of pain at this time. During the following month the patient gradually improved again and became finally convalescent. The tumor, which had reached to within one inch or so from the umbilicus, had now quite disappeared, leaving a uterus measuring two and a half inches in cavity.

The narration of this case was given very minutely by Dr. Rutherford, and it goes to show what an extremely narrow escape the patient had had from death by pyæmia, and what a dangerous method of treatment, in some cases of fibroids, that by electricity must be, even with medium degree of current-strength. The effect produced upon the neoplasm was undoubtedly that which caused it to slough, and the products became absorbed. In this way the entire disappearance of the tumor was effected.

Ruptured Tubal Pregnancy.—Dr. Bantock reported before the British Gynæcological Society an interesting case of ruptured tubal pregnancy. The patient was found looking very pale and exhausted with a feeble pulse of 150. Abdomen tympanitic and extremely tender during examination. Cervix admitted index finger; body of uterus somewhat in retroverted position. Above and in front there was an ill-defined tumor of small size with a feeling of resistance in its immediate neighborhood. Slight bloody discharge from vagina. Her age was twenty-six; one child five years of age. For last six weeks has complained of pain in left groin and hypogastrium. Last menstruation about thirteen weeks ago. She now has several recurring attacks of sharp abdominal pains followed by faintness. Following the last attack she fainted and her physician was sent for. She was found blanched to a degree and retching. Dr. Bantock diagnosed ruptured tubal pregnancy, and the place of residence of the patient being unsuitable in many respects for an operation, he had her removed to hospital at

once. Although the patient arrived, several hours afterwards, in an almost dying condition, Dr. Bantock operated, removing the sac, placenta and fœtus attached. The sac was found lying in front of the uterus and over the bladder. In doing this Dr. Bantock went at once for the pedicle, forcibly compressing it to prevent further hemorrhage, which had been pretty free up to this time. After ligaturing the pedicle the abdominal cavity was well washed out and a drainage tube inserted. The patient made a very good recovery, returning home on the twenty-third day after the operation. The following is the report of the pathologist on the specimen: "The fœtal sac is thin walled and about three inches in diameter; it consists of the outer part of the Fallopian tube. The remainder of the tube lies on the posterior surface of the sac, into which it opens by a crescentic aperature nearly half an inch in diameter. The inner wall of the sac is for the most part smooth except where shreds of placental tissue are attached to it. The ovary is small and perfectly separate from the sac."

In connection with this interesting case it is worthy of notice and commendation that Dr. Bantock refused to operate at the patient's home. Such cases in our experience should always be removed to the place where the surgeon has been accustomed to operate. In Dr. Bantock's case the patient was in so critical a condition that she had no recollection of having entered the hospital; and it is a fact extremely valuable to bear in mind. Many a favorable case of abdominal section has been lost by operating at the patient's home, and this has occured from a desire on the part of the surgeon to give way to the importunities of the relations and friends.

Diagnosis of Ruptured Ectopic Pregnancy and Twisted Pedicle of an Ovarian Tumor.—Dr. Bantock says there is always an amount of shock present when strangulation of the pedicle takes place and he thinks it is better to wait until the symptoms of shock have passed off before operating. The symptoms recognized by Dr. Bantock were, localised peritonitis, high temperature, quick pulse, vomiting and great abdominal tenderness. After a few days these symptoms

subside and the patient recovers. *Dr. Barnes* was of opinion that in twisted pedicle the symptoms quoted went from bad to worse. The first shock was not all; there was a continuous shock from increasing injury leading to exhaustion, and he thought it was very desirable to operate at once. He thought it was rather hazardous to wait, as similar symptoms might be due to ruptured tubal pregnancy.—(*Brit. Gyn. Jour., Nov.* 1888.

Gynæcological Operations in Tubercular Subjects. (*Jules Batnaud.*)—The indications and contra-indications for surgical interference in tubercular patients have frequently been discussed. Whenever a thin, sickly female of weak constitution is affected with uterine disease, demanding surgical interference, careful and repeated examination of the chest should be made, and the patient kept some time under observation. If tuberculosis is only suspected, an operation may be undertaken, but great care is necessary for some time after, as a slight cause may light up acute disease, ending in death.

Psychoses and Gynæcological Operation. (*Fillebrown, Hamburg.*)—The appearance of psychoses after operation upon the female genitals has only lately been observed by operators. The causative relation of the operation is by no means clear, and the analysis of cases only renders the association of cause and effect more and more difficult to comprehend. Naturally we look first for some evidence of predisposition, either in the family history or in the history of the patient. Prof. Werth, of Kiel, reported six cases of psychoses following operation. In thirty-two total extirpations of the uterus two cases occurred.

The Menopause in its Relations to Disease. (*James B. Hunter, N.Y.*)—The climacteric is not merely a local change, but something more. It means a profound constitutional revolution. Among the local changes which take place may be noted: 1. The atrophy, and growth of fibrous tissue in the stroma of the ovaries at the expense of the Graafian vesicles. 2. Atrophic change in the mucous membrane and glands of the uterus, with increase of fibrous tissue. 3. Atrophy of the vagina and external genitals. 4. Diminished blood supply of

the pelvic organs. Preceding these changes is often an exaggeration of all the normal conditions, with increased vascularity and nervous phenomena. This is the period when neglected lacerations of the cervix uteri are apt to become evident. It is the period of malignant degeneration. It is the period at which hereditary traits, especially insanity, are prone to appear. The preliminary period spoken of may be either brief or long. It is one of heightened arterial tension and marked disturbance of the circulation. The condition may be seen and studied in cases in which the monopause has been prematurely induced by removal of the appendages. The frequent and painful flushing of the face, accompanied sometimes with vertigo, are symptoms often experienced for a year or so after the operation. Dr. Hunter drew attention to the two systems chiefly influenced by the change, namely, the circulatory and nervous systems.—*New York Medical Record*, January, 1889.

Technique of Vaginal Hysterectomy. (*James B. Hunter, N. Y.*)—Dr. Hunter, in his paper, makes a most important statement in regard to capital operations, namely, that two facts must be demonstrated in regard to such operations. 1. The immediate mortality from the operation under consideration must be small. 2. The results, immediate and remote, must be such as to overbalance, in benefit to the patient, the risk incurred by the operation. In regard to the second point Dr. Hunter rightly assumes that in so far as hysterectomy goes it has been amply proven. He therefore deals with the first point and shows that the operation may be performed so as to render the mortality very small.

The Danger of Galvano-caustic Chemical Currents of High Intensity.—DANION has known of very serious complications, and even death, to be caused by the application of currents of high intensity. The author has experimented on rabbits and has shown that these currents of high intensities cause various congestive effects, the danger of which has been demonstrated by the death of animals and by autopsies made at different periods during the experiments. Currents of small intensity

produce effects as good as currents of high intensity, and are unattended by danger. The conclusions the author arrives at are that (1) numerous and varied experiments prove that currents of high intensity often bring about marked congestions, frequently followed by inflammation.

(2) The clinical results obtained in the treatment of uterine affections confirm in a very clear manner the effects of experimental galvanism. High intensities frequently produce grave inflammatory symptoms and cause death.

(3) There exists no physiological fact, nor any empirical result, which can be used as an argument in favor of the substitution of currents of high, for those of low intensity.

(4) Tripier's method of using currents of low intensity has been enlarged upon by Apostoli, who employs currents of high intensity, the dosage reaching 200 and 250 milliampères.

Vaginal Hysterectomy.—We find in this article seven cases of vaginal hysterectomy recorded; one for fibroid uterus and six for malignant disease. Five of the six cases of cancer were completely cured, while the sixth died five months after operation. M. Pozzi opens the anterior and posterior cul-de-sacs of the vagina in the usual way, and ligatures the broad ligaments with silk, instead of clamping them. Five of the malignant cases were squamous epithelioma of the cervix, the sixth being cylindrical-celled epithelioma. The one death which occurred resulted from shock the evening after the operation. In this case anæsthesia had been prolonged and deep, and the kidney structure was greatly altered.—*S. Pozzi.*

Pelvic Peritonitis. (J. EASTMAN.)—Inflammation of the pelvic peritoneum is more common than pelvic cellulitis, and is frequently overlooked. Pelvic cellulitis is frequently the result of a pre-existing pelvic peritonitis. Owing to the periodic movements and engorgements of the Fallopian tubes, the inflammatory process frequently spreads to other adjacent structures. The author follows Winckel in classifying perimetritis, perisalpingitis, perioöphoritis, pericystitis, periproctitis under the term pelvic peritonitis. Adhesions are formed with neighboring organs, and each recurring attack of inflammation extends these

adhesions. The serum poured out may form abscesses, or cause complete intestinal obstruction. Amongst the more important causes of pelvic peritonitis are noted the brain-cramming of our school system, the eruptive fevers, especially in young girls. The action of gonorrhœa as a causative agent is overrated, though the author is aware of its importance. Induced abortion and means used to prevent conception, especially the use of cold water injections, are also important causes.—*Am. Jour. of Obstetrics.*

A Plea for Early Operative Interference in cases of Obscure Pelvic Pains. By R. B. Hall, M.D.—An interesting article, read at the 1888 meeting of the American Medical Association. The author dwells shortly on the probability of many cases which were in older text-books described as cases of cellulitis, being in reality cases of salpingitis and pelvic peritonitis. For the relief of this condition, removal of the uterine appendages has been advocated and practised with markedly successful results. The operation in the beginning was opposed by many surgeons, but is now recognized as warrantable in certain cases, except by a few bigoted men. The chief objections to the operation are: (1) The difficulty of diagnosis in many cases. (2) It was said to unsex the patient. (3) The difficulty in separating the adhesions deep down into the pelvis.

In replying to these objections, the author points out that the difficulty in diagnosis is not so great as it appears, if the symptoms and physical signs be carefully noted. It is, perhaps, in the majority of cases, impossible to diagnose between hydro-, pyo- and hæmato-salpingitis, but practically the differential diagnosis between these three conditions is a matter of small consequence, seeing that the treatment is the same for all. The author emphatically denies that the operation unsexes the woman and causes her to assume masculine features. The patient is certainly unsexed as regards her productive powers; but a woman with diseased conditions of both tubes, with chronic ovaritis and adherent tubes, will be just as barren as one from whom both ovaries and tubes have been removed. That the operation destroys her sexual desire

is contrary to all experience. "The changes in the person of the subject are not more marked after this than after the McDowell operation, and the disease requiring it calls for surgical interference just as urgently as does the existence of a large tumor." The objection to the operation on account of the numerous adhesions is now past; careful breaking down of these adhesions, ligaturing the larger bleeding points and the insertion of a drainage tube have overcome this objection.

In conclusion, the author advocates the following plan of treatment: For twelve to eighteen months, try proper and constant care and treatment, which, if not followed by more than temporary relief, should be followed by removal of the diseased organs.—*Jour. of Amer. Med. Association.*

Total Vaginal Hysterectomy. By SECHEYRON.—Great progress has been made in total vaginal hysterectomy, both in the *technique* and result of the operation. The mortality attending this surgical procedure is becoming less year by year; thus, Leopold, Klotz, Brennecke and Heilbrun can show a series of cases with an extremely low mortality. Péan has a record of sixteen operations without a single death. In cases of cancer limited to the body, or cervix of the uterus, or restricted to one portion only, total vaginal hysterectomy is advisable. Partial extirpation is not to be recommended. The total operation is merely palliative, just as excision of a cancerous breast is. In both cases the operation is undertaken in the hope that the disease will not return. The author considers the operation justifiable from two points of view; firstly, as regards the mortality which is steadily decreased; secondly, as regards the remote results, which seem very favorable; upon this point, however, there are certain elements of uncertainty, and a further study of the future of the cases is necessary before expressing a decided opinion on the matter.—*Archives de Tocologie.*

On Locking, Retroversion and Strangulation of Uterine Fibroids in the Pelvic Excavation.—Dr. J. Matthews Duncan, the author of this paper, stated that the locking in the pelvic excavation implied impaction, not the result of adhesions. Its

effects might be produced by pressure into the pelvic brim of a tumor too large to pass the retroversion of the gravid uterus in its characteristic form. The symptoms and treatment of the two conditions were nearly alike. Strangulation, with locking, of a fibroid, with or without retroversion, was a rare accident. A case was described. Dr. Duncan had not seen a similar case of strangulation of or by a gravid uterus.—*Am. Jour. of Obstetrics.*

Chronic Pelvic Cellulitis, and the Conditions which Simulate it.—Hardon holds that chronic pelvic cellulitis never occurs except as a sequel of acute pelvic cellulitis. The clinical history of acute pelvic cellulitis presents three stages: a stage of effusion, characterized by the effusion of serum into the cellular tissue; a stage of solidification, characterized by the solidification of the effused serum; and a stage of absorption or of suppuration. It is impossible for effusion of plastic material to take place as a consequence of chronic inflammation, that pathological process being characterized by cell proliferation and hypertrophy of normal structures—conditions which have never been found to exist in the pelvic cellular tissue. The researches of Coe show that when so-called pelvic cellulitis has existed during life, no appearances corresponding to this condition have been found after death. Clinical evidence points in the same direction. In acute pelvic cellulitis the womb is immovably fixed by a deposit of plastic lymph, while in so-called chronic cellulitis the womb is movable, and if the organ be lifted to its normal position, the hard masses in the broad ligaments disappear with a rapidity which is inconsistent with the theory of a chronic inflammatory process. What, then, is the significance of such masses? Dr. Hardon believed them to be due to accumulation of blood in the pelvic veins—a view which is corroborated by a study of the anatomy of those veins. The beneficial effect of the vaginal douche in such cases is due to the fact that it lessens the amount of blood in the pelvic blood-vessels, and hastens involution by diminishing the œdemic congestion, thereby lessening the weight of the organ, and allowing it to assume its normal

position in the pelvis. Another condition often regarded as chronic pelvic cellulitis is found in salpingitis, with distension of the tube. The diagnosis in uncomplicated cases is not difficult, provided attention be directed to the distinctive features of the conditions just referred to, with which it is liable to be confounded. When pelvic cellulitis occurs by extension of inflammation from the tube, and one attack follows another, the condition is not one of chronic pelvic cellulitis, but of renewed attacks of acute pelvic cellulitis. Acute pelvic cellulitis is often secondary to disease of other pelvic organs, but not necessarily so, since aspiration in the stage of effusion will abort an attack, and sometimes the pelvic organs are then found to be free from disease. Another condition sometimes mistaken for chronic pelvic cellulitis is contraction of the utero-sacral ligaments. The fact that in many cases such contraction disappears after the patient is etherized, and is not found after death, as shown by Coe, proves that it is not due to organic changes in the tissues. Hardness in the roof of the pelvis may be disregarded as an obstacle to operations about the cervix, except when it is accompanied by other symptoms denoting the existence of acute inflammation.—*Trans. South. Surg. and Assoc.*, 1888.

Pyo-salpinx and its Operative Removal.—Prof. Gusserow (*Arch. f. Gyn.*, XXXII., 2) presents a series of thirty-one laparotomies performed during the last three years, for the cure of this trouble, in ten of which he had removed both tubes; but one case died, and that of septic peritonitis. The author understood by the term pyo-salpinx a disease of the tubes in which they form a sac closed by adhesions to surrounding structures, which sac is filled with pus; clinical experience did not uphold the distinction between pyo-salpinx and salpingitis purulenta. The main thing for the patient was whether or not the diseased tube be closed and a purulent secretion collected on its mucous membrane. The cases cited were of such a nature. In all there had been symptoms of perimetritis, for longer or shorter periods, ere pyo-salpinx had been demonstrable. It is, in fact, impossible to determine the existence of a closed tube-

sac filled with pus before adhesions have taken place at the abdominal openings of the tubes. The etiology, therefore, resolves itself in that of perimetritis. Despite the fact that gonorrheal infection plays a part, it must not be overestimated; cases of perimetritis can often be traced to abortion, labor, etc.; investigation had shown gonococci to be present in the pus from the tubes in extremely few cases; in his own cases the investigation had been followed by uniformly negative results. The occurrence of pyo-salpinx must then be regarded as the extension by continuity of a catarrh of the uterine mucous membrane—of gonorrhœal or other nature—to the tubes, and then, by the entrance of the tubal contents into the abdominal cavity, inducing a localized peritonitis or perimetritis; the perimetritis so produced leads to distortion and matting together of the pelvic organs, particularly of one or both tubes; the purulent secretion thus finds no outlet, and a retention-cyst forms in the tube.—*Amer. Jour. Obstetrics*, Nov., 1888.

The Early Recognition of Cancer of the Cervix Uteri. (Henry C. Coe, N.Y.)—Dr. Coe (*Med. News*, Feb. 16, 1889) has written under the above title a very useful and instructive paper. He has written, however, from the pathologist's side of the question, which we would naturally expect, knowing Dr. Coe's experience in that direction. The advice given by Dr. Coe, to the general practitioner, to recognize the initial forms or suspicious beginnings of malignant disease in the cervix, is well timed and of inestimable value. Dr. Coe draws attention to certain popular fallacies with regard to malignant disease of the uterus, such as the so-called "cachexia" of the patient and to the presence of foul discharges from the uterus. He also shows the error of regarding malignant disease under the old familiar division of Scirrhus, Medullary cancer, Colloid cancer, and Epithelioma. Such a division does not represent distinct varieties, but accidental conditions or successive stages of development. We now know that all this, as Dr. Lusk says, served to introduce into the subject an element of confusion detrimental to progress, as

rarely two observers were found in agreement as to the classification of the disease in the same patient.

Dr. Coe does well to tread lightly upon the ground involved in the value of an opinion based upon the microscopical examination. We have been assured that such a specimen, on more occasions than one, after microscopic examination by a competent microscopist, showed no evidence of malignancy, and still the patient died of undoubted cancer. The practised clinical observer can rarely be deceived in the appearance of a diseased cervix, and if he is in doubt he should always give the patient the benefit of that doubt, and operate. After considering some other important points in connection with this subject Dr. Coe speaks of substituting Schröder's excision of the cervix for Emmet's trachelorrhaphy in the treatment of old standing cases of connective tissue hyperplasia, with eversion of the cervix following bilateral laceration. The author does not, we hope, think this idea is original, no matter however correct it may be. In a paper read before the Dominion Medical Association at Ottawa, September, 1888, entitled "Indications for, and Comparative Merits of, Emmet's and Schröder's Operations on the Cervix Uteri," the whole matter was discussed and the advantage of Schröder's excision or amputation of the cervix brought for the first time prominently before the profession. At this meeting the method of teaching the consecutive steps in the performance of the two operations was demonstrated by means of damp clay models.

Reviews and Notices of Books.

The Pathology and Treatment of Displacements of the Uterus. By Dr. B. S. SCHULTZE. Translated from the German by J. J. MACAN, M.A., M.R.C.S., Eng., and edited by ARTHUR V. MACAN, M.B., Master of the Rotunda Hospital, Dublin, with 120 illustrations. New York: D. Appleton & Co.

We hail with much pleasure this first English translation of Prof. Schultze's book. Among gynæcologists he is well known as the apostle of certain new, but not yet universally accepted doctrines on the subject of which it treats. On the normal position of the uterus the author holds views that have been rather slow in securing adhesion. Prof. Schultze believes that the commonly accepted views as to the normal position of this organ have been derived from its examination in the cadaver, and he points out in defence of his own opinion that in the dead body every factor in the position of the uterus which depends on muscular action, even intra-abdominal pressure itself, is destroyed, and that—irrespective of the position of the uterus during life—a retro-position existing after the dead body has been lying for days in the dorso-horizontal, may have been caused by the weight of the organ itself, the passive mobility of which after death is so great. Schultze believes that the position of the uterus or, more correctly, its long axis when the body is upright is almost, if not quite, horizontal, and that this may be proved by a careful bimanual examination, and by a sound and goniometer he has devised for the purpose. We believe that he has demonstrated his propositions, and agree with the editor when he says in his preface that "while it would perhaps be too much to expect that the truth of the views here put forward should be at once acknowledged in all countries, but their acceptation will assuredly come."

The first chapter is devoted to the general pathology of the subject, and it is considered most fully and patiently from every possible point of view, and occupies sixty-seven pages of the translation. Schultze believes the normal form of the uterus in

the milliparous woman to be one of moderate anteflexion. He therefore speaks of normal and of pathological anteflexion. The latter he believes to be always the result of cicatricial processes of the utero-sacral ligaments. Dysmenorrhœa he rarely considers to be the result of stenosis. Dysmenorrhœa in cases of pathological anteflexion he believes to be due to metritis, and he ably maintains his opinions. There can be no doubt that the theory of mechanical dysmenorrhœa has been pushed much beyond its legitimate limits, or, as Schultze says, "stenosis is much less common than its diagnosis." Earnest students of displacements of the uterus need not be reminded of the importance, according to the author, of parametritis posterior as a cause, and we believe that few who have followed his painstaking and careful methods can remain unconvinced.

As regards anteversion, the author thinks it of little importance independently of the metritis, with which it is so generally associated. As a logical sequence he therefore has little to say in favor of pessaries or any other treatment for this condition, except for the cure of the metritis and other forms of inflammation which complicate it. He believes all pessaries to be injurious till such complications are removed, and then they are commonly unnecessary. In this opinion it will be observed that he is opposed to certain eminent American authorities, especially Thomas. In our humble opinion Schultze has the best of the argument.

Backward displacements and their numerous complications receive all the attention their great frequency and importance, as the cause of much suffering, deserve. His vast experience and great skill in ther management make this a most valuable part of his book. He employs pessaries very extensively, but with much care and discrimination so essential to success. He has, however, not much to say in favor of the Hodge pessary and its many modifications. His favorite is his own figure-of-eight pessary, which he moulds to suit each case from copper rings coated with soft rubber. The valid objection to the coating of soft rubber is now done away with by the more modern coating of celluloid. The figure-of-eight pessary he believes better than any other to meet the prime indication in the treat

ment of retroversion, namely, the holding of the cervix in the upper and back part of the pelvis so as to permit of intra-abdominal pressure acting as is normal on the posterior surface of the uterus. Dexterity and mechanical skill in moulding this pessary to suit individual requirements are very necessary. But this is true of all pessaries. For cases of retroversion and prolapse, with relaxation of the outlet of the vagina, he has devised a sledge-shaped pessary, which he strongly recommends. In certain cases of marked retroflexion he combines the use of an intra-uterine stem with the figure-of-eight. Descent and prolapse are also fully considered in all their aspects. The various plastic operations are described, and Hégar's colporraphia posterior is the author's favorite. The Alexander operation and the more modern ventral fixation of the uterus are merelp mentioned, and that with little favor. Schultze does not seem to perform them.

The last chapter is devoted to a full consideration of inversion. This is also a most satisfactory one, except as to treatment. In the simple chronic form the author advises manual reposition, and says in his resumé that "the only instrument admissible is a tampon of India-rubber." No mention is made of the method by elastic pressure with cup-shaped instruments devised by Lawson Tait.

Of the whole work it must be said that it is a monument of industry in original observation. It is illustrated with one hundred and twenty most valuable woodcuts. The translator's and editor's work is beyond all praise, but this is only what we should expect of the Macans. Of the publisher's work, we cannot say more than that not one single exception can be taken to it.

Clinical Lectures on Diseases of the Urinary Organs.

Delivered at University College Hospital. By Sir Henry Thompson, Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital, etc., etc. Eighth edition. London: J. & A. Churchill, 11 New Burlington street, 1888.

The present edition of this admirable work comprises a course of thirty-two lectures delivered by the author from

time to time at the University College Hospital. There are six lectures more than appeared in the last edition. The chief additions relate to the suprapubic operation for stone and for tumors; to the results of digital exploration of the bladder; to the most recent modes of affording relief by operation in cases of advanced prostatic disease; to the latest operative treatment for tumors of the bladder, besides embracing a *resumé* of the author's entire experience of operations for calculus, numbering in all about nine hundred cases. All the lectures have been thoroughly revised and some re-written, while many of the illustrations are quite new and original. The suprapubic operation for the removal of large calculi and tumors as well as for purposes of exploration is especially discussed at considerable length, the author being evidently very much impressed with its advantages in suitable cases. The treatment of the wound, regarding which such a diversity of opinion exists among surgeons, is in his hands made very simple. He says "the only attempt I have made to limit its extent has been by introducing a large suture about an inch below the upper angle through the abdominal walls and sometimes another an inch below that; but I have never used a single suture in the bladder. Before stitching, however, I insert in the bladder, at the lower angle of the wound, a tube made of silk gum, about a third of an inch in diameter, and six or seven inches long. It is a good plan to attach this by a firmly tied ligature to the lower of the two sutures, which effectually prevents its slipping. The tube may be left for about two days or so to insure a free passage for the urine, and then be removed. I have rarely found any catheter necessary." In addition the lectures deal fully with the commoner genito-urinary affections, with which the general practitioner has often to deal, such as stricture, cystitis, enlarged prostate, hematuria, etc., so that the book should be in the library of every physician as well as surgeon, and will be found also of service to the advanced student. As an illustration of the great reputation of the author it might be mentioned that this work is employed as a text-book in most of the medical schools of Europe, and for that purpose has been translated into the French, German, Italian, Spanish and Russian languages.

Handbook of the Diagnosis and Treatment of Skin Diseases. By ARTHUR VAN HARLINGEN, M.D. Second edition. Enlarged and revised. Philadelphia: Blakiston, Son & Co.

The fact that a second edition of this book has been called for attests its value. Much new material has been added and also a number of very excellent illustrations. This work might be named a dictionary of skin diseases for it consists of a number of short articles on the various skin diseases arranged in alphabetical order. As a reference book for students it will prove especially useful, as the information needed on any skin affection can be quickly got at. Many tables of differential diagrams are given and various short articles on such subjects as baths, desquamation, electricity in treatment of skin diseases, hyperæsthesia of skin, ointments, diet, etc., are introduced. The articles are short and to the point, giving all the essentials of diagnosis and treatment. Pathological anatomy is conspicuous by its absence. We can heartily recommend this work to students as a handy book of reference in skin diseases. It, however, should not take the place of the larger and more complete treatises on diseases of the skin.

The Causation of Disease, An Exposition of the Ultimate Factors which Induce It. By HARRY CAMPBELL, M.D, B.S. (London), Assistant Physician and Pathologist to the Northwest London Hospital. London: H. K. Lewis, 136 Gower street. 1889.

A very remarkable book; nothing of the kind published; may become a classic. The title scarcely suggests clearly enough the nature of the work which is quite new. This book is really a treatise on disease from the evolutionist's standpoint, and the first that is sufficiently broad to be worthy of a follower of the great master spirit—Darwin himself. The author, in his preface, briefly states the two ways in which a book may be written; and for our part we are glad he worked out the subject independently and did not first "saturate himself with all the available literature." The latter course, too common, accounts for the lack of individuality in most of the books of the day. At the same time the

author does show that he has been "saturated" with the most important principles of organic evolution as worked out by the great master thinkers on the subject. It is not easy to give a synopsis of this work. While clear, the argument is very close, often subtile. We admire very much the breadth and soundness of the basis on which the superstructure rests. Nor is the author's bold and candid criticism of those writers standing high in public esteem other than refreshing. We agree with his implication in one or two places that an undue demand for facts, without which the Anglo-Saxon mind is so slow to see a principle, as uncalled for, if not an evidence of relative stupidity—a sort of color blindness to principles as distinguished from mere concrete facts. The man that cannot believe in evolution with the mass of evidence now gathered is not likely to be convinced at all. It is not worth while to waste energy in attempting to further enlighten minds of such constitution. We hail the book with especial pleasure as it is another evidence that the medicine of the future must be biological and will only be scientific when it becomes so. We have just entered fairly upon a new era, by a side path (bacteriology), but the sooner we get into the main road the better. This work will open a way through an as yet comparative desert. All who expect to understand the present and to forecast the future should read this truly magnificent production. T. W. M.

Archives de Physiologie Normale et Pathologique.

The first volume of the fifth series of this periodical, now in its twenty-first year, has appeared, and contains about four hundred pages of reading matter, illustrated by two plates and fifty-eight figures. Besides a "bibliography" or review of current monographs, etc., and an analysis of the contents of the various foreign periodicals, this volume contains eighteen original articles, most of them of considerable value. The names of Dastre and François-Franck are linked with that of the veteran Brown-Séquard as editors. Brown-Séquard is, of course, the guiding star and controlling spirit of this periodical. Whether the future pronounces his influence over French physiological and pathological research healthful it cannot but declare it potent. The chief editor is unquestion-

ably one of the most brilliant thinkers France possesses to-day in the realm of medicine. Scientists tend so much at present to form schools, to get into little shoals, like so many herrings all going the one way that a bold, independent, even if erratic thinker, like Brown-Séquard, is a great blessing to his age. Better the full tide of mental life with some error than the exclusive, narrow doctrines of a limited school. We would not care to follow this illustrious man as our guide; but we regard such as he as essential factors in scientific progress, and as much needed just now.

He contributes a leading paper to this volume on "The Field of Action of Inhibition in Physiology, Pathology and Therapeutics." After defining "inhibition" as the partial or complete cessation of an activity owing to irritation, he proceeds to enumerate the many different ways in which this is shown, both in the domain of physiology and of pathology, and the paper is very suggestive. Perhaps the contribution of greatest general interest is the outcome of the author's views on inhibition and affirms that "normal, like hypnotic sleep, is the result of an inhibition of intellectual activity." He adduces evidence to show that sleep may occur with all conditions of vascularity of the brain, though he does not deny that anæmia favors sleep. He indicates that during sleep there is unusual activity of some functions as well as diminution of others. Thus there is persistent contraction of the pupil; contraction of the orbicular muscles; contraction of the internal and superior recti, and contraction of the blood vessels of the retina and cerebrum. He points out that the pigeon deprived of its cerebral lobes sleeps and awakes periodically, hence he is not satisfied that the "irritations" which cause sleep, are cortical; he inclines to place them rather in the basal regions of the brain. This is one way of viewing the subject; but it seems to us that it is, after all, not entirely sound, nor calculated to give as broad a view of the phenomena as could be desired. Why not regard some of the phenomena as the result not of an increased activity *per se* but as owing to a lessened activity in closely related parts (as in the case of the ocular muscles)? Until this relation—greater activity of the part relatively, and not due to any irritation necessarily accompanied by lessened activity of another, *as the*

rule—is more recognized, physiology and pathology will remain narrow and consequently erroneous. The specialism of our day does not favor the perception of such relationships. Each man is too much in his own corner to understand even that in relation to the whole. We have not space to examine other of the many papers in this volume, but we are glad some of the authors have stated the conclusions drawn from their researches in synoptical form, a practice to be imitated. T. W. M.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, January 11th, 1889.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

Double Tubercular Pyosalpinx.—DR. LAFLEUR exhibited for Dr. Wm. Gardner specimens from the case. Both tubes were enlarged, sausage-shaped, and tapering towards their uterine extremity. The outer third of each tube contained a quantity of thick yellow pus. The mucous membrane beneath was extensively ulcerated, and in it there were a few small caseous nodules. The muscular coat throughout the whole length of the tubes was thickened and very firm. In the subperitoneal connective tissue there were several small miliary tubercles. Microscopic examination showed extensive ulceration of the mucosa, with general infiltration of all the coats of the tube by a small-celled granulation tissue. A few giant cells were observed.

DR. WM. GARDNER said that at the first examination he found the ovaries enlarged and cystic. Both tubes and ovaries were densely adherent. The patient, aged 29, had been married five years; had three pregnancies. The two first were miscarriages, the third and last at full term, forceps delivery, three years ago. Since then "has never seen a well day," repeated attacks of inflammation confining her to bed six to eight weeks at a time; constant pelvic pain; profuse, prolonged, very painful, and over-frequent menstruation. Notwithstanding this, she was very fat, though flabby and anæmic. No evidences of tubercle elsewhere. The patient made a somewhat tedious recovery, and at once

expressed herself as relieved of the old symptoms. With reference to the specimens of tubercular pyo-salpinx, Dr. Gardner remarked that at a meeting of the British Gynæcological Society on 13th June last, Mr. Lawson Tait had exhibited tubercular pus-filled tubes from a patient who also had an extra-peritoneal cyst. This patient and another exactly similar had recovered.

Dr. Alloway said he had assisted at the operation, and regarded the case as a very interesting one. Tuberculous disease of the tubes and ovaries is more frequently seen in young unmarried females, and when seen in married women usually results from tubercular endometritis, the disease creeping up the tubes from the uterus. Here, however, the tubes seem to have the disease in the distal extremities, the proximal ends being free from the affection ; hence the disease could not have had its origin in the usual way from an endometritis.

Dr. Mills had frequently observed a condition of complete caseation of the sexual organs, not in young birds, but in old cocks and in hens that have bred. It often seems to come on quite suddenly. He lost a pair of birds in the moulting season that had bred very much. Both birds showed marked tuberculosis of the genital organs. Coming on, as it does, in the moulting season, it seems to show that in birds the disease attacks the weakest organs.

Dr. Bell said the disease here seems to be inconsistent with most forms of tuberculosis, as the patient had gained weight. In cases even of tuberculosis of the joints, when the disease was very limited, there is usually loss of weight.

Dr. Roddick had seen many healthy, strong men with tubercle of the testicle.

Ovarian Papilloma.—Dr. Lafleur exhibited the tumor, which was of a reddish-white color and almost entirely solid, there being only a small quantity of mucoid fluid. The walls of the various cysts were covered with papillary outgrowths, nearly filling the entire cavity. In some of the cysts fatty degeneration of the papillary outgrowths was well marked. Under the microscope the papillary nature of the growth was very evident. Each little outgrowth was supplied by a distinct

capillary loop passing into it. The outermost epithelial layer was composed of cylindrical, apparently non-ciliated, cells, the other layers of round or cuboidal cells.

DR. GARDNER gave the following history of the case: The patient, married, aged 60, never pregnant, had suffered for many years from prolapsus uteri, but had otherwise been healthy till a year ago. First noticed a lump in belly in February 1888. This had slowly increased and had become so painful that for several months she had regularly taken morphia. From being very plump she had become very emaciated. When the patient came for operation she was found to have a very severe cough and effusion in the right pleura. This was absorbed, with disappearance of the cough in four weeks. There were no adhesions of any importance and a most favorable pedicle. A considerable quantity of straw-colored peritoneal fluid. The papillomatous growth was confined to the cyst, solidly filling it. There was only one small sac, of the size of a hen's egg, which contained semi-fluid broken-down portions of the growth. Flushing of peritoneal cavity and drainage. Recovery was so rapid that the patient desired to sit up on the twelfth day.

DR. TRENHOLME had exhibited a specimen from a case of ovarian papillomatous cystoma three years ago. Since then he has had the patient under observation, and no return of the growth has occurred. As in Dr. Gardner's case, none of the cysts had ruptured.

Aneurysm of Ascending Arch of Aorta.—DR. LAFLEUR, who presented the specimens, said that the aneurysmal dilatation involved the aorta from the semilunar valves to the middle of the transverse arch. There was no distinct sac, the whole of the vessel between these two points being uniformly dilated. No adherent laminated clot was found within it, but merely a small post-mortem, soft, fibrinous clot. The inner surface of the wall of the aneurysm was roughened by numerous glistening, firm, raised, grey to greyish-yellow atheromatous patches. Most of these appeared quite recent, some had undergone fatty degeneration, and in only one or two places was there any calcareous change, and that very slight. The aorta was moderately thick-

ened, and there was but very slight inflammatory thickening about the dilated vessel. There was slight incompetence of aortic valves, due to dilatation of the orifice. The aneurysm did not reach the thoracic wall, being prevented from doing so by an adhesion of the whole anterior border of the right lung to the parietal pleura. This circumstance would probably account for the absence of definite physical signs in that situation. From the main dilatation of the aorta there was a small secondary sacculated aneurysmal dilatation, situated immediately in front of the trachea, just above its bifurcation. This sac measured an inch and a half by one inch, and could be seen upon the tracheal surface as a convex ovoid projection, which in the natural state must have caused nearly complete occlusion of the orifice of the left bronchus. Over this prominence the mucous membrane was inflamed, and through it could be felt the eroded cartilage rings of the trachea, the tracheal wall being almost perforated. The immediate cause of death was in double bronchopneumonia involving lower lobes of both lungs.

Cystic Calculus.—Dr. Roddick exhibited a large calculus removed from a patient aged 76, who had suffered from symptoms of calculus for nine years, yet the case was not diagnosed. The operation was the supra-pubic one, done in the usual way, but no sutures were put in the bladder walls. The calculus was found in a sac in the wall of the bladder, and was removed with some difficulty; some scales came off, but these were subsequently removed. There was no hemorrhage and the patient's strength seemed to improve, but on the fourth day he died of asthenia. The stone weighed four ounces and was phosphatic, with uric acid outside. No autopsy was allowed.

Cause and Prevention of Urethral Fever.—Dr. Bell then read a paper on this subject, which appeared in the February number of this Journal.

Discussion.—Dr. Roddick said in times past, when these cases were more numerous, there was no doubt many were due to want of antiseptic precaution. Twenty years ago he had seen five or six deaths from urethral fever in the hospital, some of which he felt sure were due to want of proper care of the cathe-

ters, which were simply handed to a nurse to clean. He agreed with Dr. Bell that external urethrotomy was the better operation in most cases of severe stricture, but did not believe in complicating it with an internal one at the same time. External urethrotomy, while safer than the internal operation, was by no means as simple an operation, in his opinion, as Dr. Bell had regarded it. He had seen death follow the operation and several times fistulæ persisted. He had great faith in the administration of quinine and aconite in cases of operation on the urethra. He related the case of a man who had been operated on a number of times, and whenever quinine was not given, fever more or less severe followed, but never when the drug had been administered. He gave twenty grains of quinine with or without aconite.

DR. SHEPHERD quite agreed with Dr. Bell as to the origin of many cases of urethral fever. These views were advanced by Dr. R. Harrison in the Lettsomian lectures of 1888. When in cases of enlarged prostate, and when from other causes there was injury to the urethra, if the urine was drawn off by aspiration above the pubes he had never seen urethral fever follow. He thought a distinction should be made between urethral or urine fever and catheter fever, which followed the commencement of catheter life in old people. The latter is probably due to mischief in the kidneys, and is frequently fatal in a few weeks. In these cases, as well as in true urethral fever, rest in bed and catheterizing under ether often prevented the attacks. He could not agree with Dr. Bell that the internal administration of drugs was of no avail. He had frequently seen urine fever averted by the timely administration of quinine. Dr. Palmer of Louisville advocates the administration of boracic acid for some days before catheterization to sterilize the urine. In forty cases operated on only one had urethral fever, and in this case boracic acid had been omitted. He was by no means opposed to the administration of drugs, and had great faith in both opium and quinine.

DR. T. W. MILLS said that all forms of urine fever could not be reduced to one type. No doubt chills and fever frequently follow catheterization or operation, but the occurrence of pto-

maines in the urine will not altogether explain this fact. Irritation may explain some cases. Normal urine action depends on normal ingoing influences, and abnormal on derangement of these. Has opium, quinine or whiskey been given in marked doses before catheterization ? These lessen the susceptibility to ingoing influences. He thought the views advanced too narrow, and broader grounds must be taken.

DR. STEWART asked if urethral fever could not be caused by the mere introduction of an instrument without it producing any abrasion.

DR. RUTTAN could not agree that the group of symptoms known as urethral fever were of nervous origin. He thought that there were many arguments in favor of the ptomaines theory. The toxic action of urine when introduced into the circulation is well established. Bouchard and Gautier have, besides, shown that urine partially decomposed contains alkaloidal bodies, some of which are toxic and others harmless. These all act as depressants ; they lower temperature and blood pressure, and slow the pulse. On the other hand, we see in urethral fever toxic symptoms of an opposite type, as evidenced by rise of temperature, quick pulse, and other symptoms of increased tissue change ; then, if due to alkaloids, must be caused by some as yet undiscovered constituent of decomposing urine. He could not see why it was absolutely necessary to assume that the urine underwent decomposition in contact with the wound, as Gaucher, in some recent experiments, has shown that the extractives of normal urine—creatin, creatinin, exanthin, etc.—in very small doses, were able to produce serious systemic disturbance, and, if continued, of inducing acute nephritis, anuria, and death. Bouchard, besides, has shown that urine normally contains physiological alkaloids (leukomaines) of high toxic powers. The result of the disintegration of these answers the argument of Dr. Shepherd against the ptomaine theory, as rest in bed is just the condition under which urine is excreted with smallest toxic powers. The poisonous ptomaines are found in the urine after physical or mental exertion, early morning urine being devoid of toxic power, while that at night is highly

poisonous when introduced into the circulation. Furthermore, if urethral fever is not due to alkaloids, it is at least a curious coincidence that those drugs which are most in favor in the treatment of such cases are alkaloids, and many of them physiological antidotes to ptomaines already investigated. Thus aconite is an antidote to Brieger's neuridin, and others are counteracted by opium and morphia. He could easily see how boracic acid was effective, as it is excreted unchanged by the kidneys, and would keep the urine from decomposing.

DR. BELL, in reply to Dr. Roddick, said he did not perform external urethrotomy, but merely opened the membranous urethra for purposes of drainage. If the tube was retained for but two or three days no fistula could result. He thought the catheter fever of old men was different from the urine fever following operations on the urethra of apparently healthy men. He had treated the question from a purely clinical standpoint, and did not especially consider its physiological or chemical bearings. From his point of view, what he considered necessary to prevent urethral fever were (1) to prevent lodgment of urine in contact with a wound of the deep urethra, and (2) to prevent its decomposition in such a situation.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Annual Meeting, February 1st, 1889.

The SECRETARY (Dr. Charteris) read a report of the past year's work of the Society, and regretted, owing to his absence in Europe, that the Society had not been called together before.

The election of officers for the year 1889 was then proceeded with, and resulted in the election of Dr. T. K. Holmes for President and Dr. Duncan for Secretary; after which, at the invitation of the retiring president (Dr. Fleming), the members dined together at the Grand Central Hotel.

Stated Meeting, Feb. 18th, 1889.

T. K. HOLMES, M.D., PRESIDENT, IN THE CHAIR.

The PRESIDENT briefly addressed the meeting. He returned thanks for the honor conferred, spoke in complimentary terms

of the past work of the Society, of the agreeable and fraternal relations these meetings engendered between members, and urged them to keep up an interest in the work of the Society and endeavor to make the meetings even more profitable and pleasant than they had been in the past.

Malignant Disease of the Liver.—Dr. McKeough presented, through the courtesy of Dr. Jenner of Kingsville, a sarcomatous liver. The disease was limited to the right lobe, which was enormously enlarged, the left lobe being apparently healthy. The weight of the diseased organ was nearly two pounds. Section showed masses of dark-clotted blood and a dark grey brain-like substance, which, when placed under a microscope, presented small, round, neucleated cells. It was removed from a child 19 months old, whose family history was free from hereditary taint of any kind. Had never been a robust child like the other three children in the family. When a year old the child would cry out and make other manifestations of pain if grasped about the waist. Four months before death the mother first noticed an enlargement in the right hypochondrium and a general failure in the child's condition. Was seen by Dr. Jenner a month subsequently ; was greatly emaciated, peevish, and sallow in color ; temperature normal ; pulse 108. In the region of the liver was a large, smooth, globular tumor extending about two inches below the ribs and markedly prominent in situation of gall cyst. This was tapped, but before tapping, diagnosis was between hydatid cyst and sarcoma, afterwards the latter. Pain was never a prominent symptom ; never very tender on pressure ; jaundice never marked.

Placenta Prævia.—Dr. Backus read notes of a case. It was the patient's third pregnancy, and she was, when first seen, between the seventh and eighth month, and had symptoms of placenta prævia hemorrhage, but no pain. She was ordered to bed and black haw administered. The flow ceased in a few days and she got up. Two weeks later he was again sent for ; found the patient in labour and flowing profusely. The os was dilated to about the size of a half dollar and the placenta completely covering it. In separating the placenta with the finger,

it was found attached higher up on the right side than on the left. The membranes were ruptured, the vagina plugged, and ergot administered. The pains soon increased in vigor, and plug, placenta and child were shortly afterwards all expelled together. The uterus was washed out with 1–6000 solution of corrosive sublimate, and the patient's recovery was satisfactory.

Discussion.—Dr. Duncan thought that the result justified the management of Dr. Backus' case, but referred to Lusk's advice that after the seventh month labor should always be induced, as the mother's jeopardy is much lessened and the fatality of the child is always great. He had had the care of two cases of placenta prævia, both successful. One, a woman four months pregnant, had severe flooding; plugging was the treatment instituted. The other case was interesting, inasmuch as it sustained Mueller's theory that the condition of placenta prævia was due to arrested abortion, the placenta being separated from its normal attachment in the upper segment of the uterus and engrafting itself above the internal os. The patient, who had a persistent retroflexion of the uterus, became pregnant. At about the second month she was threatened with a miscarriage. The pains and hemorrhage were, however, controlled, and she went to full term, when it was discovered she had placenta prævia (lateral implantation) and a shoulder presentation. Separation of placenta and turning were followed by a successful issue.

Dr. Holmes stated that having fairly tried the various means recommended for the treatment of placenta prævia, he was firmly convinced that a well adjusted antiseptic tampon was the best means at our command. He emphasized the importance of not removing the tampon unless marked symptoms of septicæmia developed. He had left them *in situ* for forty-eight hours without any ill consequence. In two cases in which the tampon was removed before labor was concluded, the flow of blood was so great in the short time elapsing before another could be introduced, although it was prepared and ready for that purpose, that the patient's condition, which previous to the removal of the tampon was good, became extremely critical. In nine cases which he had either under his care or had seen in consultation

there was no history of an aborted miscarriage. He was of the opinion that labor should always be induced as soon as this condition was discovered, as the more hemorrhage the less are the chances of the woman's recovery. He also considered a physician culpable if he leave the house of a patient after discovering that she has placenta prævia, unless a competent assistant be left in charge.

DR. BACKUS also read the history of a case of acute strangulated inguinal hernia upon which he had recently operated successfully.

Reminiscences of Hospital Practice.—DR. CHARTERIS read a paper descriptive of a recent visit to the hospitals of London and Edinburgh. He spoke highly of the Edinburgh post-graduate course, which he had the privilege of attending, especially the gynæcological department under the charge of Drs. Berry Hart and Haliday Croom. He had the privilege of listening to Dr. Owens' paper on *Arthrectomy* at the Royal Medical and Chirurgical Society. He thought the operation admirably suited to cases of chronic, suppurative or pulpy diseased joints, especially the knee, in cases in which the bones were not too greatly implicated and the subject free from tuberculosis. He thought arthrectomy would, in the future, frequently take the place of resection. He briefly related the history of some cases of laparotomy seen at the Samaritan Hospital, and referred to the rival claims of Drs. Thornton and Bantock *re* antiseptics.

Abscess of the Cerebellum.—The PRESIDENT read notes of a case of cerebellar abscess seen with Dr. Fraser of Thamesville. The subject was a man aged 30, with a previously healthy personal history, but a decidedly tuberculous family history. There was a distinct aortic obstructive murmur, but the heart lesion never apparently caused any discomfort, except that he got out of breath in running. When a child he had an inflammation of his left ear, and since then a constant otorrhœa and almost complete deafness in that ear, the drum being perforated. The right ear was normal. He consulted Dr. Fraser about the 1st of January complaining of being "bilious," bad taste in the mouth, dizzy, and feeling dull and heavy. His ear at this time was

slightly more painful, but was discharging as freely as ever, and continued to do so throughout his illness. About two weeks later he was again seen, complaining more of the pain in his ear and a decided staggering gait when he attempted to walk. His pulse and temperature were normal, and he had a good appetite. During the succeeding week he suffered a good deal from the pain in the ear and left side of head and face, but this, with the tendency to stagger, gradually subsided. In the course of another week the pain, however, returned, more diffused than the former attack—the left side of head and face, the top of the head, the right temple, and the back of the neck being implicated. There was also great irritability of stomach. These symptoms increased in severity until morphia (¼ gr.) was injected hypodermically. There was also some rigidity of the muscles of the back of the neck. About a week before death he had a chill, and when seen shortly after his temperature was 102°F., being the first time that his temperature was above 99°. His mind was still clear, and he had not complained of any dizziness or staggering since the early part of the case. He became semi-comatose about thirty hours before death, the eyes were drawn strongly to the right side, and among the last complaints he made was of a numbness of the left side of the body. He appeared to have good use of his limbs, and would frequently pass his hands over his forehead or pick his nose. The respiration became somewhat of the Cheyne-Stokes character. There was no muscular twitching or jerking. The post-mortem showed adhesions of dura mater to temporal and frontal bones on right side, considerable congestion of membranes, and an abscess in the cerebellum containing 3vi to 3viii of pus; it came nearest the surface at point just external to the root of seventh nerve on the left side, and extended deeply into the substance of the cerebellum towards the median line. There was no marked morbid appearance about the petrous portion of bone. An opportunity was not given to Dr. Fraser to examine the interior of the bone.

Selections.

Treatment of Epilepsy.—The following are the details of Professor Kowalewsky's (of Kharkow) treatment of epilepsy, as given by him in a recently published article (*Russ. Arkiv. Psych. and Neurolog.* xii, 3, 1888). He takes cases which he considers possibly curable (those in which the epilepsy dates back less than ten years) and in these he reckons the minimum period for treatment at two years. This he divides into four equal portions or semesters for convenience in detailing his method. During the first half year he gives his patient a drachm of bromide of soda or such other bromide salt as is selected, each twenty-four hours, adding usually three to five grains of iodide of soda, and giving the combination in two or three equal doses in the morning, before dinner, and at night in a large quantity of water. In case there follows any decided adynamia from this quantity of the bromides he decreases the dose somewhat, or in some cases intermits it for four or five days. During this semester also he stops the treatment during the catamenia in female cases. In order, however, to have this plan succeed, it is necessary to allow a good supporting diet, though preferably one of milk and vegetable food. If there exists any scrofulous taint, cod-liver oil or iodide of iron is also administered. In case there should be any symptoms of brominism, such as headache, neuralgia, etc., in the beginning of this treatment, it is not necessary to stop the treatment; as soon as it relaxed a little these symptoms disappeared. Much advantage is had in these cases from warm baths and rubbings. Usually this treatment causes cessation of the attacks so that the patient is free from them during the last three months of the half year. Toward the close of the semester the medication is stopped for a period of from two to six weeks before beginning it again. In the course of the second half year the quantity of bromide and iodide is reduced one-half and given in the same way, and at its end there is again an interval of two to six weeks. In third semester only the bromide is given and in doses of five to ten grains, morning and night, keeping up the same regimen and

diet. In the fourth half year he begins with only five grains per diem, and later only gives the medicine at intervals of one, two, three, four or six days. After this the bromides are discontinued and the patient is given small doses of nitro-glycerin or, at intervals, in some cases, tr. simulo (*capfaris coriaciæ*), which is said to have a marked influence over epileptic attacks. Prof. Kowalewsky claims that he has by following out this plan of medication already had quite a number of cures, in which the attacks have not reappeared for over ten years, and that he has lost faith in the incurability of epilepsy. Of course, in cases in which there is any specific or tubercular cause or complication the treatment must be adapted to meet the special conditions. As regards other than medicinal treatment the author recommends electricity as an adjuvant in certain cases, but cautions against its employment in any case in which there is a tendency to cerebral hyperæmia. He also found benefit in weak, irritable, anæmic cases from daily warm baths, of temperature of 25° to 28°R. (88° to 95°F.) for fifteen or twenty-five minutes, watching the condition and nutrition of the patient, and when these are improved using baths gradually lowered in temperature and not so prolonged. In some cases combined baths and electrical treatment are of advantage. The author's ideas as regards diet are liberal, but he says that for all cases of epilepsy taken together, a vegetable and milk diet is best. Alcohol he forbids even in medicine, at least in the beginning of the treatment; he says he has seen the epileptic attacks revived by even a few drops of alcohol. Tea he allows in moderation, but he advises that coffee, chocolate, etc., be dispensed with, at least during the treatment. There are other points of interest in the article, but the above are the most noteworthy, especially the success that seems to have attended the author's method of using the bromides. The quantity given is certainly not large; not even in comparison with his own treatment in other cases, for he recommends as much as three or four drachms *per diem* in cases of epileptic furor. There would seem to be some special advantage in the method or the regimen presented to bring about such specially favorable results.—*American Journal of Insanity*, Jan. 1889.

THE

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THE OLFACTORY CENTRE.

At a recent meeting of the Medical Society of London, Hughlings Jackson gave an account of a case of epilepsy with a marked *olfactory aura*. The patient, a woman, aged 53, began a year previously to have fits, the first symptoms being tremors of the hands and feet. She then saw a little black woman who was always engaged in cooking. She also complained of a horrible smell, a subjective sensation which she was quite unable to describe. She stood with her eyes fixed for a short time, and although she did not lose consciousness, she passed urine during the attacks. Paralysis of the right arm and leg supervened, and also double optic neuritis. There, however, was no defect of sight, neither loss of smell, only a disordered subjective sensation. She gradually passed into a condition of dementia. At the post mortem, a sarcomatous tumor was found occuping the whole of the anterior end of the temporo-sphenoidal lobe, enveloping the amygdalate nucleus. It did not affect the grey cortex of the hippocampal convolution. The dentate nucleus and the fibres of the internal capsule were compressed by the growth. The case is of the greatest importance as it affords very strong evidence of the position of the olfactory centre. It is the first authentic case of this variety of epilepsy, where proof has been produced of an actual lesion in the temporo-sphenoidal lobe. In the report no mention is made whether the patient was able to localize the olfactory aura in the nostril of the same side as that on which the lesion was situated. It has been shown that the olfactory centre fibres, unlike the other cerebral centre fibres, do not cross. The case further illustrates the value of experimental

physiology, for Ferrier, some years ago, pointed out that the hippocampal lobule and neighborhood is specially related to the sense of smell.

REJECTION OF THE B.A. BILL.

The Bill introduced by Mr. Lynch to allow possessors of the B.A. degree to proceed to their professional studies without further preliminary examination has been rejected by the Legislative Council, after having passed the Legislative Assembly. It is now many years since Sir William Dawson first pointed out the great injustice suffered by the universities of this Province in excluding their graduates from privileges granted to them in every civilized country. The end of this blind and ignorant opposition cannot now be far away. The sooner this is recognized by our legislators the better for all concerned.

NOTES AND COMMENTS.

Amongst New England's sons and Harvard graduates who have done good work in the profession, John C. Dalton will take rank in the first row. There had been experimental physiologists before him in the United States—good ones too —such as Beaumont and Draper, but he was the first professional physiologist, and so far as I know, the pioneer of that small, but distinguished band of men, who in this practical country and money-making age, devoted themselves exclusively to pure science. After graduation at Harvard in 1847, he taught physiology successfully at the University at Buffalo, the Vermont Medical College, the Long Island College, and (1855) succeeded to the Chair at the College of Physicians and Surgeons in New York, of which Faculty he was for nearly thirty years a devoted member and one of its most distinguished ornaments. His physiological work was excellent, embracing a wide range of subjects, but he will be best remembered by his studies on the corpus luteum, on the bile, on the placenta, on cerebral localization and on the anatomy of the brain. His text-book on physiology passed through seven editions, and it is no disparagement to the works of other American authors to say that there were special

features which made it the most important book of the kind ever issued in this country. Well arranged, clear in style, beautifully illustrated, free from all superflous matter, it was a first favorite with students and teachers. Of no text book have I such grateful memories. What a gem in text and figures was the section on embryology in comparison with other works fifteen years ago! How straight it made crooked paths! How plain the rough places! The man and his book were of a piece—good throughout. Alas! that for both, in the general profession, oblivion is inevitable, but let us be thankful that in each succeeding generation a remnant, at least, will always know and cherish the name of John C. Dalton.

My note in the January number of the JOURNAL referring to the important part played by Dr. Oliver Wendell Holmes, in spreading correct ideas in the profession on the subject of puerperal fever, and the question which I broached whether he would rather have written his essay on this subject or certain of his beautiful poems, has elicited from the Autocrat himself the following characteristic reply:

"I have rarely been more pleased than by your allusion to an old paper of mine. There was a time certainly in which I would have said that the best page of my record was that on which I fought my battle for the poor poisoned women. I am reminded of that essay from time to time, but it was published in a periodical which died one year after life, and it therefore escaped the wide notice it would have found if it had been printed in the *American Journal of the Medical Sciences.* A lecturer at one of the great London Hospitals referred to it the other day and coupled with it some fine phrases about myself which made me blush either with modesty, or vanity, I forget which. I think I will not answer the question you put me. I think often of the "Chambered Nautilus," which was a favorite poem of mine, if I wrote it myself. The essay only comes up at long intervals—the poem repeats itself in my memory, and is very often spoken of by my correspondents in terms of more than ordinary praise. I had a savage pleasure, I confess, in handling those two professors—learned men both of them—skilled experts, but babies as it

seemed to me in their capacity of reasoning and of arguing. But in writing the poem I was filled with a better feeling, a higher state of mental exhaltation, and the most crystal clairvoyance, as it seemed to me, that had ever been granted to me. I mean that lucid vision of one's thought and all forms of expression which will be at once precise and musical—which is the poet's special gift, however large or small in amount or value. There is a more selfish pleasure to be had out of the poem, perhaps a nobler satisfaction from the life-saving labor."

As might be expected, Dr. B. W. Richardson's novel *The Son of a Star*, is not lacking in interest. It is a tale of the second century, the scene of which is laid in Britain and Palestine, and the chief incidents relate to the revolt of the Jews under Bar-Kochba. We get a truly graphic account of the state of the Roman world at that period, interesting glimpses of the restless and mysterious Hadrian and, best of all, pictures of life in Britain drawn by no prentice hand. It was scarcely to have been expected that so devoted a physician and so ardent a social reformer as the author could have, in a work of fiction, dissociated himself so thoroughly from his profession and his theories. It is true a gentle old physician does appear, but he is not given a prominent place, nor does he discourse on the beauty of cleanliness or the deadliness of alcohol.

WILLIAM OSLER.

Obituary.

ROBERT PALMER HOWARD, M.D.

It is with deep sorrow that we chronicle the death of Dr. Robert Palmer Howard, the honored head of the Medical Faculty of McGill University. He has passed away, but he has left behind a memory and a record of a beautiful and noble life. To the thousand graduates of McGill scattered far and wide, his death will be felt as a keen personal bereavement. Few medical teachers in this or any age have wielded such an influence for good over students as Dr. Howard. In our next number a full account of his life and labors will be given.

DR. JOHN ROWAND.—We regret to hear of the death of Dr. John Rowand, for forty-two years a leading practitioner in Quebec. Dr. Rowand, during his long professional life, passed through many trying scenes. Shortly after graduating he was called upon to fill his share in combating the terrible ravages of "ship fever," and again in 1849, when cholera was claiming its thousands, he was found at the post of duty.

JOHN C. DALTON, long one of the best known men of the teaching portions of the medical profession, has passed away; but he has left behind more than a name. The impress he made on the men and the literature and the science of his day will not soon be erased. In the teaching of modernized physiology he was a pioneer; he anticipated the better day which is now rapidly dawning. He is credited with being the first physiologist in America to introduce experiments involving vivisection into his lecture-room. If he could lecture as attractively as he could write, his students must have been rarely fortunate men. He has produced perhaps the most readable text-book of physiology that has ever been written; and its popularity has been proven by the fact that it has passed through more editions than any other work of the kind in the English language, unless it be Carpenter's. Though he made some original investigations, it is chiefly as a teacher and writer that he moulded the thought of his day. His atlas of the brain was a work most timely and the edition proved too small for the demand. Dalton was a representative of a type of the physiological teacher we hope may not become extinct. He was broad; he kept himself in sympathy with the real needs of the medical student of his day. He never concealed the great principles of his science beneath the unessential details or mere technique. As a man he deserved and won universal respect. At a ripe age he has left the scene of his labors and their fruits. A grateful generation should do something to perpetuate his memory.

Medical Items.

—A centenary festival is to be held in Munich to commemorate the distinguished services to science of Ohm, the great physicist.

—The battle between the Members' Association and the Council of the Royal College of Surgeons, has assumed an acute form. It is easy to predict the result.

—We are sorry to learn that Prof. Westphal, of Berlin, is so ill that he has been compelled to resign his professorship. Erb, of Heidelberg, is mentioned as his successor.

—Prof. Kahn, of Prague, succeeds the late Prof. Bamberger as director of the second Medical Clinic in the University of Vienna. A third Medical Clinic has been instituted in the same university, the directorship of which has been entrusted to Schrötter, the celebrated laryngologist.

—The annual meeting of the National Association of Railway Surgeons will be held at St. Louis, Mo., on Thursday and Friday, May 2nd and 3rd, 1889. The prospects are that this will be one among the largest gatherings of medical men ever assembled in this country. Dr. W. B. Outten, of St. Louis, is the chairman of the committee of arrangements, and everything will be complete for the accommonation of the surgeons. Any information desired can be had by addressing the secretary, C. B. Stemen, M.D., Fort Wayne, Ind.

Returning Diplomas.—The Minister of the Interior of the Ottoman Empire has recently promulgated a decree whereby the diploma of a deceased physician or pharmacist must be returned to the medical school. This is an excellent measure, in so far as it will prevent, in a large manner, the use of these diplomas by quacks who have heretofore availed themselves of these opportunities. A case of this character occurred in Algeria not long since, a druggist's assistant having been discovered as practising under the protection of the diploma of a deceased physician.—*St. Louis Med. and Surg. Journal.*

A Bullet in the Chest for Thirteen Years.—Dr. C. R. Macdonald recently removed a rifle bullet from a man which had been in the chest for thirteen years. The case is chiefly remarkable from the fact that the bullet had remained in the

pleural cavity for so long a time without setting up pleurisy. It entered the back of the shoulder immediately below the spine of the scapula, and probably entered the pleural cavity by penetrating the intercostal muscles. The operation was performed with antiseptic precautions, and the wound soon healed. A splinter had been removed from the wound of entrance some months after the accident, which occurred to the man whilst marking at a rifle range in Berlin. The bullet had gravitated to the lower part of the chest.—*Lancet.*

ANTIPYRINE IN SEA-SICKNESS.—As this drug has been both lauded and condemned as a remedy for relief of this distressing malady, the personal experience of a prominent physician in its favor will be read with some interest. Prof. Wm. Goodell of Philadelphia writes as follows to the *Medical Record* of recent date:—"Having lately crossed the Atlantic twice, I had ample opportunity in myself and in others to test the virtues of antipyrine in sea-sickness. Both the outgoing and the return voyage began with a storm which lasted three days, and almost all the passengers, including myself, were laid up. I took in divided doses 30 grains of antipyrine on each of these days, and although they did not enable me to go on deck while the storm was at its height, yet I was made comfortable enough in my berth to pass away the time in reading. Other passengers who took this medicine on my recommendation agreed with me that, while the remedy did not cure them of their sickness, it made it more bearable by lessening their nausea, by relieving them of their headaches, and by soothing the pains in their bowels. But it was in the sequelæ of sea-sickness that I found the antipyrine of great velue. It acted like a charm for the headache, the abdominal pain, the nausea, and other nerve-phenomena which so often linger on indefinitely after the brunt of sea-sickness is over. By five-grain doses given every two hours during one morning, I got on deck the next day two ladies, who lay on their backs for over a week, unable to keep down any nourishment whatever. One of them was a lady physician from Syracuse, N.Y., whose name I have forgotten, but who, I hope, will see this letter and corroborate my statements. The first dose made a new woman of her. This success gave the antipyrine such a reputation that my stock was soon exhausted by a run upon it from those who were suffering from the after-effects of sea-sickness, all of whom were invariably relieved by it."—*College and Clinical Record.*

DOMINION ILLUSTRATED PRESS. FROM A PHOTO. BY NOTMAN.

THE LATE DR. R. P. HOWARD,
Dean of the Medical Faculty, McGill University.

THE

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Original Communications.

NOTES ON THE PROTEIDS OF THE URINE.

BY R. F. RUTTAN, B.A., M.D.,
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By the term albuminuria, when unqualified, is by most modern writers meant the true or intrinsic albuminuria, *i.e.*, urine containing substances coagulable by heat and acids which have been excreted with it, and does not include hæmoglobinuria. Although authorities are almost unanimous in the opinion that the coagulable bodies found in urine are derived from the blood of the glomeruli, yet, as Senator points out, there are many other possible sources within the substance of the kidneys, *e.g.*, the blood of the interstitial vessels, the lymph and various epithelial cells of the kidneys—all of which might yield albumen to the urine and are more or less affected in the processes which lead to albuminuria, such as congestion, inflammation, and renal degenerations.

It is customary to speak of the phenomenon of albuminuria as if it were due to the presence of one definite body, coagulable by heat and precipitated by certain reagents. For a long time this represented our entire knowledge of the proteids of the urine, and although more recent and careful study of the coagulable matter of the urine has demonstrated that this is not the case, yet, so far as the ordinary procedure in examination of urine goes, we still speak of albumen being present or absent according as a precipitate is or is not produced by the action of a reagent and wholly disregard the fact that most ordinary

reagents precipitate at least two albuminous substances, viz., serum albumen and serum globulin. Nitric acid, for instance, throws down serum albumen, serum globulin, egg albumen and hæmi-albuminose, and, if carefully applied, an opacity may be obtained due entirely to anecin; on the other hand, urine may contain peptone when no precipitate whatever is obtained.

It may be assuming too much to say that the majority of physicians entirely disregarded the composite nature of precipitated albumen, but the fact remains that while the detection of coagulable matter in the urine has long been regarded of the highest diagnostic value, the profession is only now beginning to appreciate the probable importance in diagnosis and treatment of a careful investigation into the nature of this precipitate. Hitherto a detailed study of the proteids of the urine required too much time and demanded a knowledge of chemical manipulation not usually possessed by a practitioner, besides it had never been shown to be of sufficient practical importance to merit the expenditure of the requisite time and energy.

Physiological chemists have now determined that at least four distinct forms of albuminous matter may cause the symptom known as albuminuria vera, viz., serum albumen, serum globulin, hæmi-albuminose and peptone. In blood plasma we find at least two forms of coagulable matter, serum albumen and serum globulin; and in many cases of albuminuria we find, not one, but both of these substances present in the urine. They are not present, however, in the same proportion as in blood (viz., 1.5 to 1), nor are they found to exist in urine in proportion to their relative diffusibility. No constant relation exists. We sometimes find an albuminous urine when the coagulable matter is 90 or even 100 per cent. globulin; and, again, very many cases of albuminuria vera, in which, by the most careful testing, no globulin can be found.

The result of these observations has led to the recognition of the two conditions of *serinuria* and *globulinuria* as special forms of albuminuria.

Hæmi-albuminose and peptone are more difficult to detect than either of the preceding, and hence they have not been so

carefully looked for. The former has hitherto been found only in connection with osteomalacia, but there is very little doubt that it is excreted under other conditions of the system as well. It has distinctive chemical properties, and, like peptone when it occurs alone, can easily be identified; thus it is soluble in strong nitric acid, precipitated by dilute acid and by warming, but the precipitate produced by warming the liquid is dissolved on boiling, and is again precipitated on cooling. It is not precipitated by acetic acid or carbonic acid like serum-globulin.

A urine giving no precipitate with heat, nitric acid, or picric acid, but yielding a marked opacity with phospho-molybdic or phospho-tungstic acids and acetic acid after the urine has been clarified by precipitation with neutral lead acetate, indicates that it contains peptone.

Ralfe's well known test reacts when considerable peptone is present, but it is not decided enough to detect traces. It is made by floating the suspected urine on a few c.c. of Fehling's solution in a test-tube. Above the line of phosphates, if there is much peptone, a delicate rose-colored halo appears. If albumen be also present, it assumes a purple tint.

Hofmann, Senator and others contend that peptone is present in every albuminous urine. It is not, however, always found associated with morbid conditions of the urine, but may occur in urine otherwise quite normal. Its clinical significance is only now being fully elaborated. It may be generally stated, however, that its presence in urine is frequently associated with hyperpyrexia, with purulent exudation, or with the disintegration of pus cells somewhere in the body. In one set of cases it seems to be associated with a disorganization *en masse* of the leucocytes, as in typhus fever, diphtheria, tertiary syphilis, smallpox, phosphorus poisoning, etc. In another set of diseases it is associated with local inflammatory affections that have a tendency to become purulent—*e.g.*, pleurisy, pneumonia, abscess, parotitis, etc. In twelve cases of rheumatic effusion, J. von Jaksch found peptonuria present, and generally he regards it of great diagnostic value in doubtful cases between simple and purulent exudation. He is not strongly

supported in this view, however, by more recent observers. Oliver regards it as indicative of imperfect or perverted liver work, and Pancancowski has observed it in numerous cases of cancer of the liver not associated with coagulable albumen.

The methods of determining the different forms of albumen in urine are now reduced to such simple terms as to be within the power of physicians who have not received a special training in chemical manipulation; a systematic search for the various proteids in a case of albuminuria can be made by any one who is able to devote a few hours to acquiring the necessary manipulative skill. If such a course were pursued by those who have the opportunity, no little light might be thrown on many of the debated questions connected with albuminuria.

To every reader of modern medical literature no terms are more familiar than those of normal or physiological albuminuria, sometimes called cyclical, functional, alimentary or intermittent, according to the mode of onset or the time of occurrence of the symptoms in the cases reported. These terms imply the existence of an albuminuria in persons where general health is unimpaired, and who did not at the time of examination give any history or exhibit any symptoms to account for its presence.

Are we justified in assuming that albuminuria can occur without serious systemic disturbance or a coexistent lesion of the kidney? After carefully balancing the evidence for and against, I have elsewhere expressed the opinion that it may be regarded as an established fact that the urine in health may contain at times coagulable matter,—not that it can be shown to exist in every sample of urine, as we can demonstrate the presence of urea or phosphoric, but it has been found so frequently, by so many accurate observers, in the urine af perfectly healthy persons that we can no longer regard its presence in normal urine either as a rare exception or as a curiosity of no significance. Nevertheless, the doctrine that the presence of albumen is invariably a sign of disease is still strongly upheld by many writers, notably Dr. Geo. Johnston, but the continual accumulation of evidence from all sides has now forced many of the supporters of this view to admit that there are at least

exceptions to a dogma which was formerly held to be absolute. More exact methods of research and the application of more delicate tests have doubtless added largely to our knowledge of the conditions under which albuminuria occurs, yet it is not so much to new methods and reagents, as to the recent changes in the theories of urinary secretion, that this change in public opinion is due.

Since, then, we are no longer justified in regarding all forms of albuminuria vera as symptomatic of severe organic changes in the kidney itself, or of morbid systemic disturbance, we must distinguish the physiological or harmless from the morbid albuminuria. There is, of course, no hard and fast line of demarcation between these two forms of albuminuria any more than there is between health and disease, but one form passes into the other. Yet few questions are of such importance to the practicing physician as this. In his capacity as medical adviser to insurance companies he has to decide whether he will follow the rule of rejecting any candidate who has albumen in his urine and thus deprive his company of many good risks or decide for himself whether or not a given case is one of functional albuminuria, thus incurring the risk of passing a candidate who has incipient nephritis. The natural tendency of both insurance companies and their advising physicians is to err on the safe side, and they adopt the former alternative. This Dr. Tyson has recently shown* in many cases to be unfair to both candidate and company. Of no less importance is the power to differentiate these two forms of albuminuria in private practice. Dr. Tyson, in the article above cited, points out the following considerations which should have influence in forming a diagnosis, viz., absence of tube casts, absence of albumen in morning urine, and a high real specific gravity (*i.e.*, of the urine for twenty-four hours) in a person under 40 years of age, are indicative of functional albuminuria, while a large quantity of urine, the presence of casts, of cardiac hypertrophy and arterial tension, the presence of the gout or of Bright's eye, are, of course, indicative of renal mischief. But, apart from these symptoms, the examination of

* Philadelphia Medical News, Nov. 1888, p. 545.

the urine alone affords a possible aid to the solution of this question. The observations of Senator, Werner, A. F. Hofmann, Macguire and others go to show that no little diagnostic aid can be obtained by comparing the quantities of serum albumen and serum globulin. (Hofmann's *Eiweissquotient.*) Dr. Macguire (in *Lancet* of 1886, part I, p. 1061) has recorded some valuable observations on this question. In two cases of granular kidney he found two and a half and four parts of serum albumen to one of globulin ; in one case of anæmic disorder of the kidney, one part of serum albumen to two and a half of globulin ; and in two undoubted cases of functional albuminuria and one of puerperal albuminuria, the coagulable matter was 100 per cent. globulin.

Again, much information might be derived from the quantitative estimation of the coagulable proteids. Esbach's Albuminometer affords a ready method of estimating albumen quantitatively and at the same time of determining the relative properties of serum albumen and globulin. It is strange, indeed, that although this convenient and accurate mode of estimating albumen has been before the medical profession for about two years, no practitioner has made use of it to show what, if any, are the quantitative relations of the precipitated proteids to the intensity or the nature of the renal inadequacy.

CASES IN PRACTICE.

By J. M. Elder, B.A., M.D.C.M., Huntingdon, Que.

Case I.—*Uterine Fibroid; Removal; Recovery.*

I cite this case, not because its rarity renders it interesting, for it has none of those striking features presented by the gynæcological cases recently reported to the Montreal Medico-Chirurgical Society, but rather because it is typical of many cases met with in country practice, and which the physician must treat as best he can, owing to inability of the patients to consult a specialist.

Mrs. C., aged 35, thirteen years married, mother of five children, consulted me first in December, 1886. A small woman, anæmic and wasted, with a countenance expressive of

constant suffering. Family and personal history good. Present trouble began two years ago, at her last confinement, when midwife told her that she had failed to remove all the placenta, and that a "shred" was left hanging down into the vagina. Since then she has never been well, being constantly troubled with dragging pain in back, profuse vaginal discharge resembling menses, headache, constipation, loss of appetite, and weakness. Lately, too, she had developed a hectic fever, with flushes of heat, chills and sweats alternately. A constant desire to micturate, but no pain accompanying the flow. She had been treated for some time for prolapsus, but without benefit!

Examination.—Vagina packed by a hard, smooth tumor, rather larger than an orange, movable, and pediculated—the pedicle passing up into os uteri, which fitted it like a ring on little finger. Sound passed into uterus beside the pedicle a distance of three and a half inches. Tumor bathed in a sanious, non-fœtid discharge evidently coming from interior of uterus.

Advised removal of tumor, but the usual horror of country-people for an "operation" prevented consent being given, and in the interim I prescribed Fl. Ext. Ergot ♏xx, K. Br. gr. v, t.i.d., and advised carbolized vaginal douches. The effect of this treatment was to lessen the discharge and also the size of the tumor; but this latter, as a result of its starvation, began to slough, and the discharge became so fœtid that she sent for me and indicated her willingness to undergo any operation. By this time she was much emaciated; no appetite; pulse 120; temperature 102°; decidedly septicæmic.

On April 9th, 1887, assisted by Dr. Cameron, I proceeded to remove the tumor, using ether as the anæsthetic, and having patient in dorsal position at edge of bed as for a forceps case of midwifery. Grasping the tumor firmly in vagina with vulsellum forceps, torsion was tried in vain. I then delivered the tumor (a fibro-myoma, weighing 10 ozs., 14 inches in circumference, onion-shaped) as one would a child's head, and pulling on it until the os uteri presented at the rima vulvæ, I ligated the pedicle by transfixion and a double ligature, and then excised it, being careful to retain the other end of it by means of the

ligatures. Grasping this close to the os with a pair of forceps, I managed by torsion, assisted by a curette, to detach it from the intra-uterine wall at its attachment high up on the right side. The hemorrhage was almost *nil*—probably as a result of the course of ergot—and after carefully replacing the uterus and douching out thoroughly both it and the vagina with sublimate solution (1–3000), I dressed the vulva with a pad of sublimated jute and put on a bandage as for a case of midwifery. Saw patient next day, removed urine by catheter, found fever down to 100°, and feeling better in every way.

I was rather anxious about her for the next nine days, as the spring freshet prevented me seeing her, or hearing any news of her; but the nurse followed instructions regarding keeping her clean, and she made an uninterrupted recovery, being confined to bed only eleven days. Normal menstruation on May 13th, and she has since got fat and strong, proving herself to be as "well as ever" by nearing another confinement, which is, to her mind, the only drawback in the whole case.

CASE II.—*The Use of Antifebrin in Pneumonia.*

Judging from occasional notices in medical journals, as well as from hints dropped by hospital authorities, it would appear that antifebrin has had an up-hill job of it to work its way into favor with the profession as a reliable antipyretic, while its most lucky rival—antipyrin—has been lauded as almost a panacea. With a view of helping to do justice to the cheaper drug, I now wish to give my experience of its use in pneumonia. We have had almost an epidemic of the disease here since January, and I have now before me the temperature charts and notes of a dozen consecutive cases in which the fever was successfully controlled by antifebrin, and in the majority of which it was *the only medicine used*, though the routine practice of hot applications to the affected portions of the lungs was carefully followed. It has with me proved much superior to quinine, digitalis, tartar emetic, or any of the "old reliable" stand-bys.

The ages of the patients varied from 7 to 85, and in none of the cases was resolution delayed beyond the seventh day, nor

were there any complications in the convalescence. As a rule, the patients were too far away to enable me to see them even once a day, so I used to leave a thermometer with the case, with instructions to give a five-grain powder of antifebrin whenever the fever reached a certain point (102°–103°). In this way I assured myself that no more than necessary would be given, as the dose would only be repeated when the fever went up again. The result of a dose was sharp elevation of temperature for a few minutes, followed in twenty to thirty minutes by a profuse sweating and rapid defervescence of temperature to nearly normal, and then came the most gratifying feature of all—two or three hours good sound sleep for the patient. We all know what a gain even a few hours is in this disease, and this calming effect of the drug I found almost uniform.

The urine, too, always improved in character, being no longer so loaded with lithates as we generally find it in these cases, but I doubt if this was due to any diuretic effects of the drug (as some claim for it), because the quantity of urine was not increased, and I am rather inclined to the opinion that the amount of work thrown on the kidneys was lessened by diminution of tissue metabolism due to the antipyretic effect of the drug. I found that young persons bore the drug better, and took larger proportionate doses of it, than older persons; but at the same time they had longer intervals of a pyrexia. I have managed a case through five days on 25 grains, and that was all the medicine required except a small calomel purge on the second day. In the case of the patient aged 85, I gave at the crisis of the fever brandy ʒii with tr. digitalis ♏v every two hours for four doses; and I was never able to give him more than 2½ grains of the drug, as even that dose reduced the temperature by 3°.

To sum up, I claim the following advantages for antifebrin in pneumonia, if given in not more than five-grain doses, and only as often as the thermometer shows it to be necessary:

1. It controls and regulates the fever with certainty.

2. It husbands the patient's strength by giving intervals of refreshing sleep.

3. It is easily given, dissolved in *warm* tea or water, and does not cause nausea.

4. I have met with no untoward effects from its use with the above-mentioned precautions.

5. It has given me better results in complete resolution of the affected lung tissue than any drug I have tried.

Retrospect Department.

QUARTERLY RETROSPECT OF MEDICINE.

By R. L. MacDonnell, M.D.,
Professor of Hygiene, McGill University; Physician to Montreal General Hospital.

TABES DORSALIS.

The Treatment by Suspension.—During the last three months of the old year the mechanical treatment of tabes dorsalis has had full trial at the Salpëtriere and the results have been so satisfactory that M. Charcot has recently devoted a lecture* to it. The practice is not absolutely novel, since in 1883 it was first initiated by Dr. Motchoukowsky of Odessa, who published a pamphlet upon the subject, but it received no attention in Western Europe till 1888, when Professor Raymond of Paris while on a scientific mission in Russia was struck with the results he witnessed. In Motchoukowsky's pamphlet considerable improvement was ascribed to it in twelve tabetic persons; also in various neurasthenias, independent of tabes, in which the sexual functions were re-established after this treatment. The patient is suspended by means of a Sayre's apparatus for a period beginning with a duration of half a minute and progressively increasing up to three or at most four minutes, an interval of two days occurring between each suspension. In order to exert greater traction on the spinal column it is well to raise the arms every fifteen or twenty seconds. Eighteen tabetics, embracing four hundred suspensions, have been so treated. Excluding four who were not suspended more than three times, the improvement was marked in fourteen, and eight of these most remarkably. They were all confirmed cases, and had mostly been

* De la Suspension dans le Traitement de l'Ataxie Locomotrice Progressive et de quelques autres Maladies du Système Nerveux (*Progrès Medical*, Jan. 19, 1889).

treated by cauterization along the spine. Improvement in walking, at first temporary, but becoming continuous, took place after eight or ten suspensions. The patients could then stand more easily and walk without assistance. After twenty or thirty suspensions Romberg's symptom disappeared. Vesical troubles were relieved, lightning pains diminished and even disappeared, and there was a return of sexual desire and capacity. Anæsthetic and other sensory disturbances also disappeared, and general improvement set in. One patient had a return of lightning pains whilst being treated, but subsequently again underwent improvement, which in all the rest was uninterrupted. In no case did the knee-jerk return, or the pupil reaction become normal. M. Charcot considers that though at present the treatment is in the experimental stage, yet the results are encouraging.*

Professors Eulenberg and Mendel report† equally favorable results. The suspensions, which took place three times a week, being at first of one minute's duration, then increasing by half a minute up to three minutes. About twenty patients have been thus treated, and with the following results: 1. A certain number of patients have, immediately after the suspension, a readier and freer gait, less staggering, and complain less of lancinating pains (in some also improvement was noted in visual symptoms). 2. No ill effects followed the suspension.‡

After all it is well to follow the advice of the Greek sage and to hasten slowly, especially when therapeutic measures of a sensational kind are in question. The *Lancet* of the 16th March sounds an alarm. "Try it with caution and proceed with sceptical judgment." Remember the natural history of the disease and do not forget the cases in which temporary improvement took place when no treatment at all was practised. In tabes, as well as in other spinal cord diseases, inexplicable pauses in the course of the disease are known to occur, sometimes to an extent sufficient to lead one to suppose that their progress took

* Lancet, Jan. 26th, 1889.

† Berliner Klin. Woch., No. 8, quoted in the Lancet.

‡ A full description of M. Charcot's cases is to be found in the Progrès Medical, Feb. 23rd, 1889.

place *per saltum*. And, again, in tabes the various symptoms have a time to come and a time to go; they appear and disappear spontaneously and we cannot explain their presence or their absence. The inexperienced attribute favorable progress to treatment, but it takes many individual instances to prove a general rule. And, lastly, can we always be sure of our diagnosis? The combination of a zealous but inexperienced practitioner, a tabetic patient and a suspension apparatus is dangerous.

Dr. DeWatteville's case, as reported in the *Lancet*, is interesting, and, so far as one case can serve, shows the benefits of treatment. The patient, aged 39, married, a carpenter, said to have had rheumatic fever ten years ago. (Tabetic pains?) Ataxy first perceptible in 1877. In 1879, vomiting and diarrhœa, diplopia, shooting pains, and bladder complications. The treatment by suspension has been carried on for six weeks. "He was much more steady both in walking and in working at his trade than he had been previously to the commencement of the treatment by suspension. He had not been able to walk at all without the aid of two sticks for many months before January of this year, but he recently walked three miles and a half without experiencing any sensation of fatigue." The gait has improved. The lightning pains have almost entirely disappeared. Sexual power has returned. "These erections partake of the nature of 'spermatic crises' so characteristic of spinal cord disease. Charcot has noted them in his series of cases treated by suspension." No doubt the patient has been benefited. Suspension has been practised for from thirty to fifty seconds twice a week, axillary straps being always used. Dr. DeWatteville is of opinion that suspension by the head alone should never be practised until the other mode has been frequently practised first.

At the Paris Society of Medicine the subject of suspension in tabes again came under discussion (*l'Union Médicale*),* when M. Duroziez pointed out that if tabes be invariably due to an affection of the spinal cord, it is difficult to explain how the method acts, and he asked whether other varieties of tabes must

* Lancet, March 30th, 1889.

not be admitted, and also what are the cases in which the treatment was efficacious. To this M. Abadie replied that the majority of neurologists concur in believing that locomotor ataxy is a more complex affection than was formerly supposed. The remarks of Dejerine in particular have shown that patients who during life presented all the objective and subjective signs of tabes dorsalis have not shown any spinal lesion, but an interstitial peripheral neuritis. This proves that the combination of symptoms described under the name of locomotor ataxy is complex, and having regard to abortive forms and mild forms of very slow evolution, limited to a few lightning pains and a few disturbances of cöordination, as well as to the severe forms associated with joint affections, it may be concluded that the morbid varieties of ataxia are daily increasing in number. It is highly possible that the treatment by suspension, which amounts to an elongation of the nerve roots, may only act in certain forms—viz., those in which the spinal degeneration is slightly marked. "So far," added M. Abadie, "I have noticed that among the patients whom I have submitted to suspension, it is not the true ataxics who have derived the most benefit, but those who had ocular (*sic*) lesions of indefinite nature."

The Connection between Tabes Dorsalis and Exophthalmic Goitre.—Cases occur in which the symptoms of locomotor ataxy exist in combination with those of Graves' disease.* What is the nature of this association? It may be fortuitous, but is it possible for the tabetic nerve lesion to produce the exophthalmic goitre in virtue of some slight trangression of its usual limits. Clinical and experimental evidence exists to show that lesions about the restiform bodies produce the triad of symptoms which are characteristic of Graves' disease. In cases of the association of the two diseases, have the sclerosis and degeneration on which the tabes depends exceeded their usual boundaries and damaged those nerve cells and fibres which are concerned in the production of the tachycadia, enlarged thyroid, and protruding eyeballs.

Locomotor Ataxy with Hemiplegia.—Tabes may complicate other diseases and may itself be complicated. Its unity may be

* Lancet, March 2, 1889.

denied with truth or at least on a scientific basis. Is hemiplegia part of the history of locomotor ataxy or is hemiatrophy of the tongue? Six cases of hemiplegia developing in the course of progressive locomotor ataxy have been put on record by Miss Blanche Edwards in the *Progrès Médical*. Aphasia may also complicate tabetic hemiplegia frequently in cases in which this is right-sided, but also in cases of left hemiplegia. The aphasia may suddenly arise without loss of consciousness and without paralysis, or with loss of consciousness and without paralysis, or with both. Is the hemiplegia of locomotor ataxy akin to the lightning pains, to the paralysis of the ocular muscles and sphincters, or should it be regarded as apart from the affection? Vulpian rather regarded transient hemiplegia in tabes as a hysterical accident. MM. Hernot and Joffroy have maintained that capillary hemorrhage is the mechanism of transitory paralysis. Pierret thought that hemiplegia in ataxy should be explained on the view that atrophic zones existed in the posterior region of the brain. Excitations starting from the posterior regions may act upon the psychomotor regions either in an inhibitory or excitatory fashion, and this may account for the sudden hemiplegia, transitory spasms, and epileptiform and apoplectiform crises.*

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Cerebral Complications in Pleurisy with Effusion.—In connection with this subject, already mentioned in the Retrospect of Medicine (MONTREAL MEDICAL JOURNAL, Vol. XVII, No. 8, page, 599), it is interesting to note that Dr. W. B. Hadden† has recently contributed a paper on Cerebral Abscess in Empyema, in which three cases of this association are recorded.

Diagnosis of Renal Calculus.—At a meeting of the Clinical Society of London, held on the 22nd of March, the symptoms indicating the presence of a calculus in the kidney came under discussion in connection with papers read by Dr. Stevenson, Mr. Butler-Smythe, and Mr. W. H. A. Jacobson. Dr. Hale White said that he had found it a valuable sign of renal calculus when much pain was complained of in bringing the psoas into action.

* Lancet, March 30, 1889.
† St. Thomas's Hospital Reports, Vol. XVII, new series, 1887.

One of the patients whose case was recorded by the reader of the paper had been treated as an in-patient for sciatica and hip disease in several hospitals. Mr. Barker thought that too much attention had been attached to hæmaturia in the diagnosis of renal calculus. In some cases blood was abundant and yet no stone was present. Mr. Bruce Clarke said that a large number of cases of stone occurred in which hemorrhage was never present.

Treatment of Aneurysm.—At the meeting of the Clinical Society of London, held on March 22nd, 1889, Dr. Barlow showed a case of cured subclavian aneurysm in a woman aged 52; the swelling at first increased rapidly and became as large as a chestnut; it then subsided. Treatment was by iodide of potassium and Tufnell's method, with an ice-bag over the tumor and the right arm bandaged to the chest. The iodide was continued for twelve months afterwards, commencing with a five-grain dose and increasing to fifteen afterwards. There was no history of syphilis.

Vomiting in Phthisis.—Dr. S. H. Habershon* draws attention to the singular fact that vomiting in phthisis is far more commonly met with in left apex disease, lending support to G. de Mussy's view that in some cases this symptom depends on involvement of the left pneumogastric nerve.

"*Paralysis a Frigore.*"—At the suggestion of M. Pasteur, a paper was read by M. Neumann at a recent meeting of the Paris Clinical Society on the part played by nervous predisposition in the production of facial paralysis *a frigore.* Exposure to cold alone was not a sufficient cause, but there must be a nervous predisposition in the subject, cold acting as an exciting cause, like traumatism in the induction of hysterical contracture, or in the production of gout in the gouty subject. Hence it is not to be regarded as a rheumatic affection. Inquiries into the antecedents of 41 cases were instituted. Of these many were liable to chorea, migraine, convulsions, and spasmodic tic; insanity, general paralysis, epilepsy, hysteria, chorea and ataxy were met with in relatives. The neuroses, and not organic affections (with the exception of tabes), seemed to be the more

* St. Bartholomew's Hospital Reports, Vol. XXIV, 1888.

related to the liability to facial—which, moreover, he showed might be inherited, citing an instance where five cases were observed in one family.—(*Lancet*, March 2nd, 1889.)

Purulent Pericarditis.—Chéron (*L'Union Médical*, No. 31)* says surgical interference is called for when the effusion by its quantity threatens to arrest the action of the heart; that in such a case the presence of a concomitant pleural effusion must not be overlooked, and if existing should be dealt with first. Secondly, when the effusion is of long standing and consequently liable to induce change in the cardiac muscles. Thirdly, the fact of the effusion being purulent. Fevrier (quoted by Chéron) does not refrain from recommending tapping in tubercular pericarditis, in spite of the fact that out of twenty-two cases of this form of pericarditis so treated, twenty patients died at various intervals (from eight hours to seven months) after the operation. Fairly good results have been obtained in hemorrhagic cases, five out of nine having recovered after tapping. In serous effusions simple puncture suffices, but in purulent cases the pericardium must be incised. Out of fifteen cases of purulent pericarditis treated by operation eleven died. The operation must not be delayed, and he attributes to that circumstance an instance where sudden death followed washing out of the sac, the heart being probably degenerate. The site selected for puncture by the aspirator should be the fourth or fifth interspace to the left of the sternum. For free incision it is recommended to select the fifth interspace, and to incise the tissues layer by layer for a distance of three or four centimetres, taking care to avoid the internal mammary artery, which may need to be drawn inwards; then having exposed the pericardium it may be carefully incised with a pointed bistoury, the portion of the membrane being drawn forwards by forceps. Great care should be exercised in irrigation, if this be employed.

* Quoted in Lancet, March 23rd, 1889. See also Quarterly Retrospect of Medicine, Montreal Medical Journal, Feb. 1889. p. 599.

TUBERCULAR PERITONITIS AND CIRRHOSIS OF THE LIVER.

Heintze,* as the result of the observation of twenty-five fatal cases, in all of which autopsies were made, deduces some interesting facts. He divides the cases into three groups. 1. Those where there was copious fluid effusion. Here the clinical symptoms resembled those met with in ascites from congestion, but they were distinguished from this condition by the very large amount of albumen contained in the fluid drawn off on tapping. No tubercle bacilli, however, seem to have been found. After the distension had been relieved by the removal of the fluid, the thickened peritoneum could frequently be felt and peritoneal friction could be detected. These effusion cases formed the most numerous of the three groups. 2. The plastic form, producing a coating or tumor like bodies. The pseudo-tumors formed by the exuded plastic matter could generally be distinguished from real tumors by the ill-defined character of their edges. This group comprised nine of the twenty-five cases, and in five of them there were tumors of considerable size. In plastic inflammations there is usually more pain than where there is much fluid effusion; there is a tendency to the formation of kinks in the gut and obstructing glands, so that fæcal accumulation and ileus are not uncommon. 3. The latent form, where there is neither any great amount of effusion nor much plastic exudation.

One remarkable point is mentioned, viz., the frequency with which tubercular disease of the peritoneum is associated with cirrhosis of the liver. This was found in seven of the twenty-five cases. Pleurisy was found twenty times, and signs of scurvy twice. In many cases there were long remissions, so that the prognosis is not necessarily so grave as it is usually supposed to be. The patients died mostly from general tuberculosis, very rarely from perforating peritonitis or from tubercular peritonitis. Most of the cases occurred in the male sex, frequently amongst men addicted to drink. In three instances an injury to the abdomen had preceded the commencement of the symptoms.

In connection with the coincidence of tubercular peritonitis

* Breslau Clinic, quoted in Lancet, April 6th, 1889, p. 695.

with cirrhosis of the liver, observed in seven of the twenty-five cases of Heintze, it is interesting to note the statements recently made by Dr. Samuel Fenwick on cirrhosis of the liver as a cause of general peritonitis.* He shows that chronic general peritonitis is by no means always of tubercular origin. Excluding cases of local peritonitis, he cites twenty-three cases of chronic peritonitis from the books of the London Hospital, in which no tubercle was found, and which occurred during a period in which forty-seven cases of tubercular peritonitis were registered. Non-tubercular cases are therefore half as common in adult life as those which owe their origin to tubercular disease.

Now of Dr. Fenwick's twenty-three cases of chronic non-tubercular peritonitis, seven were associated with cirrhosis of the liver, and in all there was an enlarged spleen and ascites, whilst in four there was also exudation into the pleura. In five there was chronic disease of the kidneys, with enlarged heart in three, in four associated with the thickened capsule of the liver, and in two with effusion into or thickening of the pleura. In only two instances did the chronic peritonitis seem to have originated from local causes, and in two others there was disease of the heart, but in each the capsule of the liver was greatly thickened. Amongst the females, abscesses in the pelvis seemed chiefly to have set up the inflammatory process, five of the cases being associated with this condition.

There seem, therefore, to be three chief causes of chronic non-tubercular peritonitis—viz., (*a*) cirrhosis of the liver, (*b*) chronic diseases of the kidneys, (*c*) pelvic abscesses.

In all these non-tubercular cases except one, tuberculosis of the lungs was absent, but many of them were associated with effusion into the pleura, a fact worth remembering, since some practitioners have spoken of the occurrence of pleurisy as of the highest value in the diagnosis of tubercular peritonitis.

As to the diagnosis of cirrhosis of the liver from peritonitis with effusion it is exceedingly puzzling, but it may be found to depend upon these points. (1) History. The general health has been failing, and the abdomen has been painful and tender

* Clinical Lectures on Cases of Difficult Diagnosis.

for some time before there was any well marked swelling. (2) An evening rise of temperature. (3) The abdominal swelling is often not symmetrical, and the tympanitic note which marks the site of the colon floating in the fluid, which is present in ordinary ascites, is usually wanting in peritonitis, as the colon is often tied down by adhesions or covered by the thickened peritoneum. One loin may be unusually tympanitic on account of the intestines being bound down more on one side than the other. (4) After a tapping, thickened peritoneum should be searched for. (5) The condition of the lungs. If in a doubtful case a tubercular affection of the lung could be determined, or if the physical signs of pleuritic effusion were found it would go far to settle the diagnosis in favor of chronic tubercular peritonitis.

The fact that when cirrhosis of the liver and tubercular peritonitis coexist the former precedes the latter, seems to be confirmed by the records brought forward by Dr. Fenwick, for in each case the symptoms of cirrhosis first made their appearance. In two there had been hæmatemesis two or three years before the commencement of the fatal illness, in another there had been an attack of severe epistaxis, and in all there were well marked symptoms of declining health previously to the appearance of the ascites. These cases were all admitted into the hospital on account of ascites, attended by loss of flesh and strength, and no mention is made in any of the records that tubercular peritonitis was suspected. In one instance severe pain of the hypochondrium attracted notice; in another, abdominal pain, which was acute enough to induce the patient to lie with his knees raised; whilst in a third, symptoms of peritonitis only showed themselves after the abdomen had been tapped. Along with the ascites the veins on the front of the abdomen were enlarged, and in two of the cases a hard tumor was discovered in the umbilical region. The pulse was quickened in all, and in all the temperature rose to 101° or 102° in the evenings, sinking to 99° in the mornings. All of them after death presented tubercular changes in the lungs, although there is no record, excepting in one case, of physical signs during life indicating this condition.

What circumstances should induce us to suspect that a case of cirrhosis of the liver was connected with tubercular peritonitis. We before found that this form of the disease was rarely met with excepting between 20 and 30 years of age. If, then, you found a young man affected with ascites following habits of intemperance, who was attacked with severe pain and tenderness of the abdomen, vomiting and constipation, with a rise of temperature and quickness of the pulse, you might suspect this complication. But if there was a well marked family history of phthisis or of pleurisy your suspicions would be greatly strengthened. If, in addition to these, you found a movable tumor in the abdomen, and you could exclude cancer, your diagnosis of this form of tubercular peritonitis would be tolerably certain.

" The chief points on which to ground a diagnosis should be that the tubercular affection occurs chiefly in young men, carcinoma in middle or old age of either sex ; the history of intemperance would point to cirrhosis, the elevation of the temperature to tubercular peritonitis, the probabilities of which would be further strengthened by the absence of the cachectic appearance of cancer and the accompaniment of the physical signs of tubercular consolidation of the lung."

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

TWO CASES FROM THE GYNÆCOLOGICAL CLINIC OF DR. GARDNER.

I.—*Persistent Hæmaturia without Obvious Cause.*

Mrs. P., aged 35, admitted into hospital Nov. 20, 1888, complaining of hæmaturia and lumbar pain. Has always been perfectly healthy ; never ill till present attack. Menses began at 13 ; always regular, no pain, and flow moderate ; duration two or three days. Flow has been scanty during present illness. Has had four pregnancies all to full term, the last three and a half years ago.

Family History.—Mother died of carcinoma uteri ; one sister died of some acute brain trouble, lasting three days. Otherwise good.

Present Illness.—About a year ago, while in good health, patient noticed the sudden appearance of blood in the urine. Since then it has been constantly present, the amount being about the same then as now. At the same time her eyesight commenced to fail, and she began to complain of a dull, heavy pain in the lumbar region.

Present Condition.—Patient is a well-nourished, healthy-looking woman, slightly anæmic; appetite good; bowels constipated; does not sleep well; has a dull, heavy pain in lumbar region; no tenderness. Micturition is not over frequent, and is not painful. Heart and lungs normal. Urine dark reddish-brown in color, specific gravity 1014, acid; albumen present, but not more than the blood would account for; no sugar; amount per diem about normal (40 to 50 ozs.); blood corpuscles in large numbers; crystals of triple phosphates; some bladder epithelium, but no casts.

Examination.—Chronic metritis. Nothing to be found about the bladder by bimanual examination. Urine drawn off with a catheter; is much clearer than if passed normally. By the sound nothing made out either in urethra or bladder, but urine contains much more blood after such manipulation.

Treatment.—Put on Fl. Ext. Viscum Album., 3ss, t.i.d.

Nov. 30th.—Patient etherized and base of bladder opened through vagina. Nothing abnormal found. Bladder perfectly healthy. Wound was closed with seven copper wire sutures. Left catheter in urethra and stuffed vagina with iodoform gauze.

Patient made a good recovery from the operation. The sutures were removed on Dec. 9th and the wound found to be well united. On Dec. 10th the catheter was removed and the patient discharged unimproved on Dec. 19th. She was then put on Ext. Matico Fl., but when she left the city some weeks after no improvement had been seen.

A report from her about three weeks ago, however, stated that the blood had quite disappeared and the urine was perfectly clear.

II.—*Hysterectomy for Large Uterine Myoma.*

A. S., aged 43, married, admitted into hospital Jan. 3, 1889,

complaining of an abdominal tumor. Has always been perfectly healthy. First menstruation at 15; always regular, painless flow, and of moderate duration, three to four days. For the last year menstrual flow has been very profuse, lasting from three days to a week. Has had three pregnancies, the first two being to full term, and the last (twenty years ago) a miscarriage at the seventh month.

Family History.—Mother died of "dropsy." Father alive and well. A sister died in confinement and a brother suddenly of some brain trouble.

Present Illness.—About four or five years ago patient first noticed a slight enlargement of the abdomen; this increased slowly till about two years ago, since when it has grown very rapidly, especially during the past year. At no time has she had any pain in the growth. She has been losing flesh and color, and for the last year has lost a good deal of blood at menstrual periods, but feels in good health.

Present Condition.—Patient is a large, well-nourished woman, very anæmic-looking. Feels in good health in every way; complains of nothing but the inconvenience of the tumor and loss of blood. Lungs normal. Heart: a systolic murmur heard at the apex, at the base, and up and down the sternum, slightly transmitted to the left axilla, loudest about the junction of the fourth rib with the sternum.

Examination.—Per Vaginam: A large, firm nodule is felt in the posterior cul-de-sac, attached to the uterus. Bimanually the tumor and uterus are freely movable. *Abdomen:* A large, firm tumor occupying the hypogastric and umbilical regions, attached to the uterus and freely movable with it; the tumor is quite firm except at its upper part, where it has a doughy feel.

Measurements.—Greatest girth, 32½ inches; from ensiform cartilage to pubes, 12 inches; from the umbilicus (which is in median line) to either crest, 6½ inches; girth just below ribs, 28 inches.

Jan. 17th.—Patient being etherized, an incision was made in median line and the tumor exposed. It was found to be a soft myoma. It was turned out of the wound, both broad ligaments

ligatured, and the snare applied about the cervix. The cervix was now transfixed by pins and the tumor, right ovary and uterus removed; the left ovary was removed separately. The incision was closed (the stump being left exposed in the wound), dusted with iodoform, and dressed with sublimated gauze, which was held in place by strips of Mead's plaster. Was ordered enemata of beef-tea and ℥ss brandy every four hours.

Jan. 18*th.*—During the night, temperature was up to 101.5° and pulse to 120. There was also a good deal of pain caused by flatus; relieved by two enemata of soap-suds and turpentine. Was ordered beef-tea, milk and lime-water by the mouth. Nutrient enemata stopped. Temperature and pulse normal. Urine 28 ounces.

Jan. 19*th.*—Patient in good condition; pulse and temperature normal; no pain. 21*st*—Was given porridge, soda biscuits and coffee to-day; temperature normal; pulse 84. 22*nd*—Magnes. Sulph. ℥ii every four hours till bowels moved; this acted very freely, and Pulv. Opii gr. i was given. 26th—Snare removed to-day; took out some of the sutures, dusted stump with iodoform, and dressed with sublimated gauze. 27*th*—Dressed stump again; doing well. 29*th*—Some slight discharge of pus. 31*st*—Stump almost entirely detached; removed it with scissors and took out the remainder of the sutures; condition good.

Feb. 9*th.*—Touched granulations with copper sulph. 11*th*—Again used copper sulph. on granulations. 18*th*—Discharged cured.

Addison's Disease. (Under the care of DR. MOLSON.)

L. McD., aged 32, blacksmith, residing in Troy, N.Y., was admitted into hospital on Dec. 25th, 1888, complaining of great weakness, pain in left loin, and loss of appetite. Personal and family history negative. Present illness began one year and a half ago by great exhaustion, palpitation, dyspnœa after slight exertion, and a feeling of lassitude always present. Vomiting would occur after eating or drinking. Patient states that he was continually yawning and had a constant feeling of fatigue. Vision has been failing somewhat lately. Bowels very consti-

pated and urine increased in quantity since illness began. Has suffered lately from vertigo.

With the above symptoms patient noticed that the color of the skin of the face, neck and back of hand was gradually and symmetrically deepening in tint. Has not taken any particular notice of several patches of bronzing which have appeared on his legs or trunk. Debility has gradually increased, and patient not deriving benefit from treatment, decided to enter hospital.

Present Condition.—Of fair nutrition and musculature well developed. Is continually yawning, sighing or taking deep inspirations; appearance is that of a man suffering from great fatigue. Pulse is 98, and almost imperceptible; respirations 24, and deep; temperature 98°; weight 152 lbs. Complains of giddiness on standing or sitting up.

Examination.—Heart-sounds are weak and distant; otherwise negative. No abnormal conditions found in blood. Lungs negative. Abdomen is retracted, and deep pressure over left kidney causes pain. Bowels are very constipated. Urine is negative.

The skin of the face is of a dull, darkish bronze hue, deeper in color on the forehead and neck. Patches of pigmentation are well-marked on the ears, nostrils, and the papillæ of the tongue toward its tip and edges. Several patches of variable size are seen on the mucous membrane of the roof of the mouth and soft palate. The scrotum, penis, lower portion of abdomen, and inner surfaces of thighs are deeply pigmented. Several circular patches of pigmentation are seen on the outer surfaces of both legs and feet.

Reviews and Notices of Books.

The Operations of Surgery. By W. H. A. JACOBSON, F.R.C.S., Assistant Surgeon to Guy's Hospital, &c. Philadelphia: P. Blakiston, Son & Co. 1889.

This is a most comprehensive work of over one thousand pages on operative surgery, and it is embellished with nearly two hundred illustrations, many of which are new. It is well up to date, all the modern operations on the brain, intestines, spinal cord, etc., being accurately and fully described. The subject-matter is divided into six parts—viz., Operations on the Upper Extremity, on the Head and Neck, on the Thorax, on the Abdomen, on the Lower Extremity, and on the Vertebral Canal; also an Appendix which treats of tapping and incising the pericardium. Ligature of the various arteries is fully treated of, and the description of each operation is preceded by a short account of the surgical anatomy of the part.

We are glad to see that the author does not derive his information from English sources alone, but freely quotes foreign authorities and cases published in Continental and American journals. In fact, no modern surgeon can afford to be without this work, for in it is collected in compact form a vast amount of information which has heretofore been scattered through the various medical journals of Europe and America, and could only be obtained with difficulty by the few and not at all by the many. It would be impossible to give an exhaustive review in the small amount of space which this JOURNAL affords, nor is the work of such a character as to demand a review of this kind. It must not, however, be thought that this book is a mere compilation; on the contrary, the author has decided views of his own on many points and freely expresses them, giving his own experience of many of the operations. There are a few omissions to which we should like to draw attention, and which in a new edition might be rectified. When speaking of gunshot wounds of the intestines, no mention is made of the work of Dr. W. T. Bull of New York, who was the pioneer in this branch of surgery, although Dennis, Parkes, Nancrede and other American surgeons are largely

quoted from. There is also no mention made of Fenwick's method of excision of the knee, or Tripier's amputation of the foot. Operative interference in perityphlitic abscess and appendicitis is not alluded to. Many other omissions might be mentioned, but on the whole the book is remarkably complete, and it is a credit to the author. We can heartily recommend it, not only as a text-book for students and practitioners, but as a work of reference for operating surgeons. Mr. Jacobson is to be congratulated on having produced a book so comprehensive and free from errors, and at the same time so pleasantly and entertainingly written.

Handbook of Physiology. By W. MORRANT BAKER, F.R.C.S., and VINCENT DORMER HARRIS, M.D., Lond. Twelfth edition. Enlarged, revised and re-written. With five hundred illustrations. New York: Wm. Wood & Co.

The mere fact that this work has passed through so many editions proves that it has conformed to the views of a large class of teachers of physiology. The book has been so far changed in the last two editions as to bring it fairly into harmony with the science as it is at present. Nevertheless we do not consider this work as perfect in this respect as some others. It is, moreover, as before, greatly and, as we think, unnecessarily burthened with histology. An analysis of the tissues from the anatomical standpoint is surely out of place in a work on physiology at the present time. It is better for the student to learn histology from a work on that subject; and while references to minute anatomy are indispensable in the teaching of physiology, we think the case could be met by a much less detailed treatment of the subject than has been given to it in the book under consideration. The work smacks very strongly of the English school of physiology, and lacks that breadth of treatment desirable in a book expected to commend itself to the whole class of teachers who speak the English language.

Notwithstanding these defects the book will prove interesting and profitable to a large number of students; and will commend itself, as before, to numerous teachers. To have the work in

one volume is a great advantage—one, withal, which is enhanced by the pleasing appearance of the entire book.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, January 25th, 1889.

DR. GEORGE ROSS OCCUPIED THE CHAIR.

Melanotic Sarcoma of the Clitoris.—DR. LAFLEUR exhibited the specimen. Both the glans and the body of the clitoris were enlarged, the former measuring an inch in diameter. Its surface was smooth, and on section, was of a reddish-black color, soft and friable. Under the microscope the whole of the glans and part of the corpora cavernosa were found to contain a new growth composed of large, slightly oval, granular cells, with large nuclei, closely packed and showing very little stroma. In the glans, both within and between the cells, brownish-yellow pigment granules were seen disposed in irregular groups. Numerous blood corpuscles were also observed mixed up with the cells of the new growth, indicating hemorrhages from the blood-vessels. On making a section, including both healthy and diseased parts, the new growth could be observed beginning in the corium as groups of small roundish cells taking a very deep stain and separated from the epidermal layers by a thin band of normal tissue. Nowhere was any proliferation of the epidermal observed. These characters pointed to a melanotic sarcoma. The patient was aged 80, and had suffered from severe periodic hemorrhages from the affected part. The period of growth was three years. Amputation had been followed by a good recovery.

Abscess of Brain.—DR. LAFLEUR gave the following account of the autopsy of the case:—On removing the skull-cap the dura mater was found to be slightly adherent to it over the frontal region and the motor convolutions on the left side. The dura having been removed, the corresponding portion of the left hemisphere projected about half an inch above the right and encroached on the longitudinal fissure to the same extent. The

convolutions over this area were flattened, the sulci shallow, and the pial vessels congested. The under surface of the left frontal lobe was partly adherent to the dura over the orbital plate of the frontal bone, and the brain was anchored in this situation. On removing the brain, a detached and necrosed fragment of bone half an inch in diameter was found in this situation. Through this opening a probe could be passed both into the frontal sinus and into the orbit, where there was some dense inflammatory tissue. The under surface of the left frontal lobe was softened, the convolutions and sulci obliterated, and on passing the finger through a small aperture opposite the necrosed bone, a firm, elastic, spherical tumor could be felt occupying the whole of the internal portion of the frontal lobe and encroaching on the white substance beneath the motor convolutions. An incision into this tumor gave exit to five ounces of thick greenish-yellow, offensive pus. The abscess was surrounded by a wall of dense connective tissue measuring from a twelfth to an eighth of an inch in thickness and hued with small pieces of yellowish caseous matter. The left lateral ventricle was empty, and that part of its wall adjoining the abscess was softened and only an eighth of an inch thick. The brain substance around the abscess was softened and of a light reddish-yellow color. The rest of the brain showed no abnormal change. In the apices of both lungs there were recent caseating and softening tubercular nodules. The bronchial glands showed no tubercular changes. A few miliary tubercles were observed in the cortices of the kidneys. The pus and scrapings from the wall of the abscess were examined for tubercle bacilli, but none were found. From the amount of inflammatory fibrous tissue about the abscess and the thickness of its wall, it was probable that the brain lesion antedated the changes observed in the lungs, which were very recent in character. The early appearance of symptoms connected with the left orbit pointed to disease of the bone, which had probably set up secondary inflammatory changes in the brain, resulting in abscess.

Stated Meeting, March 8th, 1889.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

Urinary Calculus Removed by Suprapubic Lithotomy.—DR. BELL exhibited the calculus and related the case. The patient, a French-Canadian, aged 19 years, had suffered from symptoms of calculus since he was four years old. An elder brother had died with similar symptoms, also his paternal grandfather, and his father had suffered for years until he passed a small calculus, when the symptoms subsided. The calculus, on section, was seen to consist of three small nuclei which were originally discrete stones, two of uric acid and one phosphatic. They were cemented into one calculus by a mixture of carbonate and phosphate of lime. It weighed 530 grains. The bladder wound was sutured with silk, but owing to badly tempered needles it could not be closed so as to be quite water-tight. A perineal cystotomy was also performed for drainage, but the latter was, for some obscure reason, unsatisfactory, and was abandoned at the end of the end of the second week, when it was found that a soft rubber catheter in the penis drained the bladder much better, allowing the fistulous opening in front to close.

DR. RODDICK said that experience had shown him that Sir Henry Thompson was right in his observation that the perineal section does not drain the bladder as well as one would expect.

Cystine Calculus.—DR. RUTTAN exhibited a calculus which he had noticed in going over the collection in the museum at McGill College. It consisted entirely of cystine. From a well marked nucleus of this rare material, the calculus was built up of a dumb-bell shape. It contained about 90 per cent. cystine.

DR. RODDICK said he removed the stone from a boy 18 years of age some years ago, and at the time had regarded it as a phosphatic calculus. The stone was easily grasped and removed, but from its peculiar shape he thought it had been caught in the ureter and projected into the bladder.

DR. FENWICK said that dumb-bell shaped calculi were not rare. He had once removed one from the urethra.

DR. ARMSTRONG showed six stones which he had removed

post-mortem from the bladder of a man aged about 65. But little was known of the previous history. These six stones were only about one-third the number found in the bladder, together with a great quantity of pus. They are phosphatic, and about the size of an almond.

Renal Calculus; Nephrotomy.—Dr. Armstrong exhibited a branched uric acid calculus which he had removed from the kidney of a woman whom he was asked to see by a *confrère*, and gave the following history: Her age was about 30. She suffered from pyonephrosis for three years. Her condition had been diagnosed previously by one or more physicians, but she had persistently refused to submit to any surgical operation. At the time I saw her she was in *extremis*, and suffering intensely from the tension in the kidney, which swelled out and formed a prominent tumor in the right side. I gave exit to about a pint of pus and removed this stone, which is the shape of a part of the pelvis of the kidney, three horns projecting into the calices. I left more than I removed, because the patient refused to have the kidney removed, and to pull out the adherent stone from the pelvis only caused pain and hemorrhage.

Dr. Shepherd thought that under similar circumstances he would have removed the whole kidney, as he doubted the advantage of merely removing the stone under such circumstancs.

Calculus Removed by a Catheter.—Dr. Sutherland exhibited a small arrow-shaped calculus which he removed in the eye of a catheter. The stone was phosphatic, and was about the size of a bean.

Phosphatic Calculus.—Dr. Fenwick exhibited a calculus removed by lateral lithotomy. He said the case was peculiar, as he had twice examined the man before for stone, but could find none, yet he had all the symptoms of urinary calculus, and the stone shown is of considerable age. He concluded that the stone was lodged in a crypt in the bladder, and only dislodged when the bladder was filled with water.

Exostosis from the External Auditory Meatus.—Dr. Buller exhibited the specimen and gave the following account of the case: This specimen was removed from the right ear of a woman,

33 years of age, who consulted me last September on account of an offensive otorrhœa. Twelve or thirteen years previously the ear had commenced discharging; this continued for some six or seven years, gradually ceasing without any treatment, until two years ago, when the discharge reappeared and has been going on ever since. In the spring of 1887 she had the ear examined by a physician, who told her that there was a growth in the ear which might some day require to be removed, but no treatment of any kind was suggested at that time. She did not remember having suffered pain or any considerable discomfort in the ear, but found the unpleasant odor from the discharge a constant source of annoyance. The discharge was not at all abundant, but the entrance of the external auditory canal was completely occluded by a smooth, rounded, very firm growth, which presented the usual characters of an auditory exostosis, but evidently distinctly pediculated, as a fine probe or a fine wire loop could be passed beyond its convexity. In view of the impossibility of removing secretion from the deeper parts I advised removal of the tumor, and as the patient was averse to any cutting operation I made an attempt to remove it by means of a steel wire snare passed well beyond the convexity, succeeding, however, only in taking off the integument covering its surface. This failure I subsequently found was due to the oblique position of the outgrowth and the slanting direction of its anterior surface, in consequence of which the loop failed to grasp around the pedicle. Had this been accomplished the snare would undoubtedly have succeeded in bringing it away. The bare bony structure now exposed appeared firm and resisting, and the patient consenting to its removal in any way that I might deem expedient, the operation was performed the same afternoon. Ether was administered and the auricle thrown forwards by an incision carried along the line of its posterior attachment and across the meatus. This fully exposed the growth to view, and in exploring its deeper surface with a strong steel director I made a firm prying pressure from within outwards, when, somewhat to my surprise, the growth snapped off and came away. You now see its shape and dimensions. The shape is that of an

irregular blunt cone ; the pedicle, four millimetres in length, is a short cylinder, narrowest where it joins the growth, being only three millimetres in diameter in this position, but four millimetres wide where it sprang from the meatus. From the root of the pedicle to the furthest extremity of the cone the growth measures 1 centimetre ; from base to apex of cone the length is 1.1 cm. and its thickness 0.6 cm. On boring a fine hole into the tumor it appears to be pretty solid throughout, but somewhat less so in the centre than at the exterior. The so-called auditory exostoses are mostly sessile outgrowths. In this respect the specimen before you is a rare one, provided as it is with a comparatively long pedicle, the neck of which is narrowest just where it joins the main body of the growth. It sprang from the posterior wall of the meatus at the outer extremity of the canal. The patient was not the subject of any constitutional diathesis, and it is probable the growth originated in consequence of some inflammatory condition or irritative process associated with the chronic suppurative disease already alluded to. The drum membrane was very much retracted and adherent to the inner wall of the tympanum, but Politzer's inflation failed to force air through, and there was no other positive evidence of perforation. After removal of the growth a watch could be heard at about one inch distance. Bone conduction was very good. The patient made a good recovery, and was able to return to her home in the country in a few days.

Hydrocephalus with Spina Bifida.—Dr. Lafleur reported the examination of a fœtal monster sent him by Dr. DeCow. Female fœtus, delivered at full term. The largest circumference of the head was about twenty inches. The cranial sutures were all gaping and the bones freely movable, the tension of the fluid not being great. On opening the cranium the brain was found collapsed over the base of the skull. There had been great distension of the lateral ventricles with subsequent rupture of the corpus collosum and effusion into the arachnoid cavity. Owing to the macerated condition of the brain it was impossible to determine whether there was any obstruction to the venous outflow ; on the other hand, there was thickening of the membranes,

which pointed to a chronic inflammatory process as the cause of the serous effusion. There was a dorso-lumbo-sacral spina bifida beginning at the sixth dorsal spine. When the body was first seen there was no tumor over this area, and examination failed to show that there ever had been one. Over the left spine the integuments were entirely wanting, and there was merely a thin transparent membrane, somewhat fan-shaped, arising from the cord and passing downwards to be attached to the lower part and sides of the spine. On the under surface of this membrane the spinal cord ramified in various directions towards the intervertebral foramina. A probe could be passed into the vertebral canal and aronnd the cord. In addition to the deformities mentioned, there was a talipes equino-varus of the right foot, a talipes calcanens of the left foot, and a double congenital dislocation or displacement of the head of the femur. On dissection the head of the femur on both sides was found displaced upwards and forwards so as to bring it almost vertically under, and half an inch from, the superior spine of the ilium. No acetabulum could be felt either in this or in the normal situation, and the head of the bone was kept loosely in place by a thin capsuled ligament attached to the iliac bone. The ilio-psoas and adductor muscles were contracted, keeping the thigh in a state of semi-flexion. The anus was situated much higher up than usual, the vulva occupying the normal situation of the anus. A further dissection was required to ascertain the condition of the viscera.

Intussusception of Ileum.—Dr. Roddick exhibited the piece of the small intestine showing the intussusception. The case occurred in the practice of Dr. W. A. Munro of Newington. Dr. Roddick read the following history sent him by Dr. Munro: The patient was an infant aged five months. At six o'clock in the evening of the 13th Feb., 1889, after the "most kicking and playing he had ever done any day of his life," was seized suddenly with the following symptoms: He became collapsed, turned pale and dark under the eyes, and could not hold up his head, crying with pain, and rapidly grew worse through the night; a very copious motion of bowels at 5 A.M. (14th) of natural color; another motion at 9 A.M. (15th) of dark bloody

slime, and another at 11 o'clock of a similar nature, but blood was brighter ; abdomen a little retracted. A fourth motion on the 16th (after an injection) of slime and fresh blood. An occasional motion after this of colorless mucus. Tumefaction of abdomen began after first day of illness, gradually increasing until it became drum-like and very tense. Occasional vomiting only at first of egg-water, but latterly of a yellow fluid with an offensive smell, and was continuous. He died on the 18th. Autopsy revealed intussusception of bowel at ileo-cæcal valve, with complete obstruction. Bowel above point of obstruction greatly distended with gas and brownish-yellow stinking fluid ; bowel below empty and contracted.

Extra-Uterine Pregnancy.—DR. TRENHOLME said he was called in consultation by Dr. A. Stewart of Richmond to see the case, and operated by abdominal section. He then read the following report and history as sent him by Dr. Stewart:—

Mrs. W., aged 41 years, New Rockland, Q. ; had two children, youngest 2½ years old. Always been healthy till last June, when she became pregnant ; since then she has been complaining of pain in hypogastric region, bloody discharges, and occasionally discharging from vagina a gelatinous-looking substance. Had felt fœtal movements first in November last.

Dec. 22nd.—I was sent for to attend her in what she thought was her confinment, although it was just about the seventh month of her pregnancy. On my arrival I found her suffering considerable pain in lower part of abdomen and round the lumbar region. On examination, os did not show any signs of pregnancy, nor that labor was to take place, and point of finger could not be introduced into external os. Uterus seemed to be pushed out of position, and with every paroxysm of pain quite a quantity of blood would come away, bright red in color. Fœtal heart could be heard distinctly on the left side below level of umbilicus (I may here state that the patient had been in the Montreal General Hospital a few weeks previously and fœtal heart had been heard while she was there), and from Dec. 22nd heart was not heard. After waiting a few hours, and finding labor was not progressing, I gave opiates and ordered absolute rest, and under

these the pain disappeared, but the discharge still continued till February 18th, when I was again called in to "confine" her; and on examination, found to my disgust that things were no further advanced than they were two months before. The pains were very severe, but were not characteristic labor pains. Opiates had no effect on them. However, after waiting all night I got discouraged and went home.

The next day she was about the same, and I called my partner, Dr. R. N. Webber, in consultation. We put the patient under ether, explored the uterus, and found it had no child in it nor anything else, but found it displaced considerably by some hard substance situated posteriorly in Douglas's fossa; and from the fact of having heard the fœtal heart two months before and no child in uterus, we concluded it must be a case of extra-uterine pregnancy. We immediately communicated with Dr. Trenholme of Montreal, and on February 27th he decided to operate, assisted by Dr. Webber and myself.

Feb. 27th, 1.45 *p.m.*—Patient was put under chloroform; abdomen opened in median line by an incision about six inches long. On reaching abdominal cavity a large body resembling very much the uterus was found, and, in fact, was thought to be the uterus. On cutting through the above a large amount of liquid ran out, mixed with clotted blood and debris. On inserting the hand a dead fœtus was found. This was removed by the abdominal opening and found to be a seven months child as near as could be reckoned. The placenta was somewhat shrivelled up and was found attached to the left broad ligament, and a large cyst-like body with muscular fibres had been developed from it and enclosed the fœtus. (This cyst-like body we thought was the uterus.) The placenta was detached from its site with great difficulty, and the hemorrhage, which was profuse, was arrested as well as possible. On exploring the fœtal cavity the uterus was found to be enlarged and in a healthy condition, as also were both ovaries. The abdominal cavity was cleansed with hot water and antiseptic sponges, and the abdominal wound closed with deep and superficial sutures, save a small opening at the lower end, into which was inserted a small piece of antiseptic

gauze to act as a drainage-tube. Over the wound was placed a strip of antiseptic gauze, four thicknesses of lint over that, and the whole kept in place by adhesive plaster. The operation was over by 2.30 P.M., it being only forty-five minutes from the time the patient was placed on the table till she was back to bed. Immediately after wound was dressed the pulse was 120 and fairly strong. Patient rallied well from the operation, and did not appear to suffer much from shock. A little brandy was given from time to time, also ♏ viii tr. opii, one dose, and fld. extract ergot ♏ vi every two hours for four doses. Patient to get nothing but a little hot water and a teaspoonful of milk every hour. 6 *p.m.*—Pulse 144; temperature 97.5°; considerable oozing from abdominal wound; not much pain; urine drawn off. 12 *p.m.*—Urine again drawn off; pulse 120; patient very restless, ♏ viii Battley's solution.

Feb. 28th, 8 *a.m.*—Patient slept very little last night; pulse 120; temperature 99°; considerable oozing from abdominal wound; complains of severe pain in right inguinal region; urine again drawn off; milk and hot water given occasionally. 5 *p.m.*—Seems comfortable; pulse 124; temperature 98.5°; vomited occasionally during the day, but is now easier; has passed urine without catheter; ordered a dessert-spoonful of cream in hot water every four hours. 8 *p.m.*—Still doing well; complains of pain in umbilical region; no tenderness on pressure; pulse 120; temperature normal; tongue dry; very thirsty. 12 *p.m.*—Somewhat restless; ♏ viii tr. opii juice.

March 1st, 8 *a.m.*—Patient passed a very comfortable night since 12 o'clock; slept about five hours; now seems much better; pulse 100; temperature 99°; Does not complain much of pain in abdomen; no nourishment allowed yet but cream and milk in hot water; drainage free from abdominal wound; dressings removed and fresh ones applied. 2.30 *p.m.*—Still doing well; pulse 120; temperature 98.5°: considerable pain in abdomen; no marked tenderness, slight fœtor in discharge from abdominal wound; ♏ viii tr. opii ordered to be given at 8 P.M. and repeated at 12 if still restless.

March 2nd, 8 *a.m.*—Patient continued doing well till about

11.30 last night, when she suddenly became collapsed and died an hour later. Family would not allow a post-mortem.

Discussion.—DR. ARMSTRONG said: Dr. Trenholme's case resembles in many particulars a case recently under my care. In November last I was called to see Mrs. X, aged 26, who thought she was threatened with a premature labor. She had considerable abdominal pain, and there was a little blood escaping per vaginam. On examination, I found a tumor evidently containing a living fœtus at about the sixth month occupying the right side of abdomen; one extremity just under the liver and the other reaching about to the middle line, near the pubis. By conjoined manipulation I could grasp the fundus uteri in my left hand, and it seemed but slightly movable. I ordered her to remain in bed, and the next day examined her again in company with Dr. Perrigo. We agreed that we would be justified in introducing the uterine sound, which we did, and satisfied ourselves that the uterus was empty. To have her under better observation I had her removed to the Western Hospital. Under chloroform Dr. Perrigo and I examined Mrs. X again, introduced the uterine sound again, and we felt sure that the uterus was empty and that we had to deal with a case of ectopic gestation. There was no definite history of rupture, but she had crossed to England and back during the summer of '88, and on the return trip she fell over a bench one day and had a good deal of abdominal pain for five or six days afterwards, but the pain was never very severe. On the 22nd December, on making my visit to the hospital, I was rather staggered by the house surgeon, who met me and announced that Mrs. X was passing a large quantity of water per vaginam. Assisted by Drs. Perrigo and Reddy I had the patient anæsthetized, and on introducing my finger I found the os easily dilated and the cavity of the uterus empty, but there was an opening in the right wall of the fundus, which I proceeded to dilate and then came upon the child, which I turned and delivered. The child lived about 36 hours, and was about an eight months fœtus. I then introduced my hand into the cavity from which I had extracted the child and removed the placenta without difficulty. The walls of the cavity were

very thin, and seemed to possess very little contractile power. I introduced a drainage-tube to the top of the cavity and applied a very firm compress. Recovery perfect. This was her second pregnancy. I delivered her of her first child in May, 1885. This was evidently a case of tubo-interstitial pregnancy. Dr. Trenholme's case is difficult to comprehend. What condition of things obtained whereby he cut through three-quarters of an inch of muscle fibre and then came upon a child in the same cavity, together with both tubes and both ovaries, is more than I can understand.

Dr. Gardner had charge of the patient in the Montreal General Hospital, but although he recognized pregnancy, he had no suspicion that it was extra-uterine. At that time he was able to hear the fœtal heart. He noticed a slight irregularity in the shape of the abdominal tumor, but attributed that to the probable presence of a tumor in the walls of the uterus.

Typhoid with Peculiar Complications.—Dr. Lafleur exhibited the liver and intestines from the case which was under the care of Dr. Geo. Ross at the General Hospital. The patient was a woman of about 30 years of age, and had suffered from abdominal pain and tenderness for some months. During the last two weeks she had had a moderate rise of temperature with diarrhœa, and had died of asthenia. Cyanosis was a marked feature during the latter part of her illness. At the autopsy a universal plastic peritonitis was found. The adhesions were firmest about the liver and spleen, those between the coils of intestine being quite recent. The capsule of the liver was much thickened and the organ itself smooth and diminished in size and weight. On section, the surface was rough, of a tawny color, and traversed by bands of fibrous tissue in every direction; these were most abundant in the neighborhood of the capsule. Microscopic examination confirmed this, the capsule being seen greatly thickened and sending out fibrous septa enclosing islands of liver tissue which were more or less atrophied. In addition to this cirrhosis of capsular origin, the central veins of the lobules were somewhat dilated and the adjacent cells atrophied. This could be explained by the condition of the right heart, both

auricle and ventricle being dilated and their muscle showing fatty degeneration. This would cause dilatation of the hepatic veins and their branches, and would also account for the cyanosis. In the intestines there were ulcers of various sizes and in various stages from the middle of the jejunum to the rectum; they were most numerous and advanced in the lower part of the ileum. Some occupied the position of Peyer's patches; others appeared to be due to inflammation of solitary follicles. In the larger ulcers the sloughs had already separated and healing had begun. The mesenteric glands were enlarged and softened. The spleen, however, though slightly enlarged, was firm, and showed numerous infarctions.

Stated Meeting, February 22nd, 1889.

WM. GARDNER, M.D., PRESIDENT, IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. SHEPHERD exhibited the following specimens of arterial anomalies:—

1. *A hitherto undescribed arrangement of the Inferior Thyroid Arteries.* In this specimen both inferior thyroid arteries came off from the right side and neither was derived from the subclavian. The *right* arose from the right common carotid about one inch from its commencement, and supplied the lower part of the right lobe of the thyroid gland. The *left* was derived from the innominate, crossed in front of the trachea to the left side, and supplied the left thyroid lobe; as it crossed the trachea it gave off a middle thyroid artery to the isthmus.

2. *A very large Thyroidima.* This vessel arose from the innominate artery and almost immediately divided into four large trunks, which completely covered the central part of the trachea. In this case also there were two superior laryngeal arteries on the left side, the lower of which was of large size and anastomosed freely with the superior thyroid of the same side.

3. *Rare Anomaly of the Lingual Artery.*—Dr. Shepherd stated that whilst operating on the dead subject some years

ago one of the members of his class cut down in the usual way upon the lingual artery of the left side, but failed to find it. The incision was a curved one, having the greatest convexity of the curve reaching the middle of the great cornu of the hyoid bone, it being the intention to secure the artery in its course beneath the hyoglossus and in the angle bounded by the junction of the posterior belly of the digastric with the hyoid bone. After carefully searching himself for it in the usual situation, and failing to find it, he made an incision along the carotid artery, and after a careful dissection discovered the missing artery. It was given off in common with the superior thyroid artery opposite the upper border of the thyroid cartilage; from here it passed upwards and inwards towards the median line of the neck upon the thyro-hyoid muscle. It crossed the hyoid bone internal to the lesser cornu, and then immediately pierced the hyo-glossus muscle and from thence onwards to the tip of the tongue its course was normal. At the usual situation of the origin of the lingual was a very small branch which ended in the hyoglossus muscle. This is a rare anomaly, and one which surgeons who are in the habit of ligaturing the linguals before excising the tongue should know. Except the lingual artery be absent, an extremely rare condition, its relation to the great cornu of the hyoid bone is very constant, even if it should arise from the carotid above or below this point, which not infrequently happens when given off in common with the facial or superior thyroid. In this case the artery was thought to be absent until a dissection of the neck revealed the displaced vessel. This anomaly originated no doubt from the enlargement of the hyoid branches of the superior thyroid and lingual arteries and a consequent diminution or rather disappearance of the main trunk of the lingual. The enlargement of already existing anastomotic branches is the not infrequent cause of anomalies of vessels, and the most familiar to the surgeon is the obturator artery given off from the epigastric in consequence of the enlargement of the pubic anastomotic branches. The anomaly above described for the first time must be very rare. Quain in his book on the arteries does not

mention it, and Dr. Shepherd, with a dissecting-room experience of many years and notes on several hundreds of subjects, had never seen it.

Malignant Disease of the Liver.— DR. ARMSTRONG showed a large cancerous liver removed from a lady aged 58. In Oct. 1887 he removed the left breast for scirrhus. The axilla was cleared of all glands. Recovery good. In December 1888 she was readmitted to the Western Hospital to have a painful nodule removed from left axilla. On examining her he found the liver projecting about three inches below margin of ribs and its free surface nodular. Jaundice soon developed and she died on the 24th of February, 1889, sixteen months after removal of the breast. Of course scirrhus is the form of cancer most likely to recur in some internal organ.

Ovariotomy.—DR. ARMSTRONG showed the Fallopian tubes and ovaries removed from a lady aged 23. She has a good family history. Her first child was born two years ago. She got up on the fourth day. Since her confinement she has had constantly more or less pelvic distress. Three months ago she was treated at the out-door department of one of our city hospitals for retroversion. She wore a Hodge-pessary for some weeks. When the pessary was removed she took a chill and was quite ill in bed for three weeks, suffering, she said, from inflammation. On admission to the Western Hospital the right ovary was found prolapsed behind the uterus and adherent there. After eight weeks rest and hot douching, her condition not being improved, I opened the abdomen to remove the prolapsed adherent ovary, when I found, in addition, the condition of the tubes here shown. Both tubes are alike, about half as large again as normal, and feeling very hard and brittle. One ligature cut through one of them. They were solid, contained no pus. They were filled with cheesy matter and the walls infiltrated with inflammatory material. Recovery perfect.

DR. ALLOWAY said the condition of the tubes has been called by Mundé pachysalpingitis. It is probably an old pyosalpinx, where the contents had become inspissated.

DR. GARDNER had often seen similar cases following the use

of pessaries. He asked if there was any history of pain or inflammation after delivery.

DR. ARMSTRONG, in reply, said there was no history of acute trouble then, but patient had an attack after the removal of a pessary three months previous to his visit.

Accessory Thyroid Gland.—DR. LAFLEUR exhibited the specimen for Dr. Bell, and said that the growth was spherical, measuring one inch and a half in diameter, and consisted of a cyst-cavity filled with a thin brownish-red fluid and a thin wall of a brownish-yellow color varying in thickness from a twelfth to an eighth of an inch. It was sessile, and quite smooth both inside and outside. At its point of attachment to the upper part of the trachea it presented a small area of very dense fibrous tissue; the rest of the tumor was soft and elastic. A section of the wall of the cyst showed numerous glandular tubes separated one from another by a small amount of connective tissue, and lined by a single layer of cuboidal epithelium with round nuclei. The outermost portion of the growth was bound by a distinct fibrous capsule. Numerous blood-vessels were observed both in the glandular tissue and in the capsule. The fluid of the cyst was highly cellular, containing ordinary red and white blood cells, microcytes, and some larger nucleated red corpuscles. Several cholesterine crystal were also observed.

DR. BELL stated that the growth was removed from a young man aged 25, a French-Canadian, with the following history: The tumor had been conspicuous and increasing in size for twelve years. The thyroid gland had been gradually enlarging for the last six years. For three years past he had been unable to do a full day's work as before on account of suffering from shortness of breath upon exertion. Under observation and local application of iodide of lead ointment for four or five weeks in hospital the thyroid gland diminished greatly in size. The tumor, which was about the size of a hen's egg, with a firm, elastic feel and freely movable, was situated directly upon the crico-thyroid space and first two rings of the trachea. It had no definite attachment, but was held in place by dense layers of fibrous tissue, in which large veins spread themselves over the tumor.

It was easily enucleated, and on section was found to be an irregular thick-walled sac containing a dark bloody-looking fluid. Microscopic examination showed that it consisted of thyroid gland tissue degenerated in the centre.

DR. SHEPHERD said he always operated by enucleation for cysts in this region, as they usually shelled out without difficulty.

DR. RODDICK said that while he quite agreed with Dr. Bell that the operation was in this case indicated, yet in similar cystic growths in this dangerous locality one is tempted to lay the cavity open and inject iodine as a less dangerous and equally effective mode of treatment.

End of Femur from Re-amputation for Painful Stump.—DR. BELL exhibited the fragment of the femur and gave the following history of the case: Patient, aged 30 years, had his leg amputated in May 1888 for injury to foot and lower leg. Sloughing of the stump followed, and in August 1888 amputation was again performed in the lower third of the thigh. Sloughing again occurred, and on January 1st, 1889, patient came to Montreal with a tightly covered painful stump with a couple of sinuses leading to the bone. The sinuses were scraped out with a Volkmann's spoon and carefully dressed, and soon healed. The stump still remained painful and tender, and removal of the adherent cicatrix and end of the bone was decided upon. Two and a half inches of the end of bone were removed, showing a peculiarity in the shape of a spur of new bone extending obliquely backwards and upwards for a little more than an inch. It is stout and strong, being a quarter of an inch in diameter at its base, and was doubtless the chief cause of the pain and tenderness in the stump. The wound healed rapidly, leaving a firm, painless stump.

DR. LAFLEUR, who examined the fragment, said the specimen showed a sharp-pointed exostosis an inch long growing upwards and backwards from the linea aspera. The medullary canal was in process of closure, a thin plate of bone with a few fenestrations being developed over the end of the bone.

Fragments of Tissue removed from Tuberculous Knee-joint.—DR. LAFLEUR exhibited the specimens for Dr. Bell, which con-

sisted of a greatly hypertrophied and villous synovial membrane with very dense inflammatory fibrous tissue underlying it. These corresponded to conditions found in an early stage of tubercular disease beginning in the sub-synovial connective tissue. The fringes seen in the normal synovial membrane were exaggerated, and papillary outgrowths of the same nature were found everywhere on the membrane projecting into the joint-cavity. The papillary processes were highly vascular, as was shown under the microscope, each one being furnished with a capillary plexus. The synovial membrane varied from a quarter to half an inch in thickness. The dense inflammatory tissue beneath this was less vascular, and showed localized aggregations of small round cells with a considerable number of giant cells.

Dr. Bell gave the following history of the case:—Patient, aged 28 years, came to hospital with great enlargement of the left knee-joint, of which he gave the following history: Six years ago he had a rheumatic attack during a third attack of gonorrhœa. Symptoms were not very acute, and the swelling soon subsided from all the other joints except the left knee. He was laid up for several months and resumed his work as a knife-grinder with the knee still greatly enlarged. It had not increased much in size since, but for two years past he had suffered from fatigue and had been unable to do his full day's work every day as before. There was a decidedly tubercular history on his father's side. The joint was freely movable. There was neither pain nor tenderness. The enlargement extended from the ligamentum patellæ to the upper end of the synovial pouch beneath the quadriceps muscle, and measured nineteen inches in circumference just above the patella, while the other leg in the same situation measured fourteen inches. A long incision was made along the outer side of the quadriceps tendon and patella. There was very little fluid in the joint, but the synovial membrane on the front of the femur, around the edges of the patella and beneath the ligamentum patella, lay in firm, thick masses with papilliform fringes of œdematous but otherwise normal looking synovial membrane. These were carefully dissected away, the quantity removed nearly filling a quart vessel. On microscopical

examination, all the evidences of an early stage of tuberculosis were present.

Dry Gangrene of Fingers from Thrombosis of Brachial Artery.—DR. LAFLEUR exhibited the amputated arm for Dr. Bell and gave the following account of its condition: The gangrene affected the thumb, forefinger and middle finger of the left arm and extended to the dorsal and palmar surfaces of the hand, between the thumb and forefinger. The affected parts were black and quite dry, and there was no inflammatory reaction in the tissues adjoining the necrosed portion. There was contracture of all the fingers of the left hand. On dissection the brachial artery was found thrombosed from the middle of the arm to the bifurcation at the bend of the elbow; below this the radial artery was found quite pervious, while the ulnar artery had a small thrombus three-quarters of an inch in length which had undergone puriform softening. The thrombosis of the brachial was most marked immediately above its bifurcation, and in this situation the vessel was much thickened and there was slight ecchymosis into the surrounding muscles and connective tissue. Here, also, the thrombus had undergone puriform softening and was partially canalized. Neither the brachial artery nor its branches showed atheromatous changes, though there was some diminution in their elasticity. The fact that the thrombosis had started in the main trunk and not in its ultimate branches pointed rather to a localized endarteritis probably of traumatic origin.

DR. JAS. BELL said the patient, aged 62 years, who was a drunkard, gave the following history: Two years prior to admission was suddenly seized with pain and swelling of first three fingers of left hand; they also "turned black." An illness of several weeks followed, which ended in recovery, but with contraction of the three fingers mentioned. They had remained contracted, useless and somewhat colder than the other fingers ever since. Two months before admission to hospital was attacked in a similar manner while on a prolonged spree. On admission the thumb and first two fingers were in a condition of dry gangrene (mummified). The hand and lower third of the forearm were cold, livid and œdematous, and the arteries were obliterated

as high as the middle of the brachial. The patient was in a low, febrile condition and suffering great pain. The arm was amputated in the upper third, and the patient made an excellent recovery. Hemorrhage was controlled during the operation by pressure upon the subclavian, as it was thought undesirable to cut off the circulation completely by an Esmarch's band.

Dr. Roddick said it looked like heroic treatment for gangrene of the fingers to amputate at the upper third of the humerus, but Dr. Bell is supported in this operation by Hutchinson, who long ago pointed out the value of the high operation in such cases. One is always tempted, however, to wait for the usual line of demarcation and so save as much as possible of the limb.

A Pin Swallowed by an Infant.—Dr. Kinloch exhibited a pin about an inch and a half long, with a glass head the size of a large pea, that was swallowed by a child eighteen months old and passed per rectum in about forty-eight hours.

Gastric and Duodenal Ulcer.—Dr. Ross read a paper on this subject. The first case related was one of ulcer of the stomach of long standing. The patient, a woman of 52 years of age, had suffered for about ten years from pain after food, sometimes of a very severe character, and frequent vomitings; had been rather pale and not strong for a few years, but had still been able, with effort, to accomplish the work of her household. Her strength finally gave out and she kept her bed. Some months ago she noticed a lump in the epigastrium, and observed very often snake-like movements in that part of the belly; so distinct were these that she became firmly convinced that a live lizard was in her stomach. The tumor was found to be firm, nodulated, movable, hardly tender, and influenced very much by the vermicular movements which occurred at irregular, but short intervals. At the time of the contraction the stomach was very distinctly felt rising hard and rounded beneath the hand and obscuring the tumor; after a few seconds it quickly became once more flaccid and the tumor more perceptible. The contractions caused pain. The stomach was not at all dilated; in fact, rather the contrary. At the patient's urgent solicitation laparotomy was performed by Dr. Bell, though it was much

doubted if anything effectual could be accomplished. The stomach was found of small size, and a firm mass occupied the greater part of the lesser curvature of the organ, encroaching upon the posterior wall. It was decided that it could not be removed. She was none the worse of the operation, and much relieved mentally. At time of writing, three months later, she was still living, but in a very weak state. It was stated that some of the consultants considered the case one of malignant disease, engrafted upon an old ulcer. Dr. R. does not take this view. He thinks the tumor a non-malignant fibroid thickening round the base of a large, very chronic, ulcer, and considers that the details of the case bear out this opinion. He has often seen tumors of the stomach of this kind reach a considerable size, most frequently near the pylorus. He admits the fact that malignant disease does sometimes develop in cicatricial tissue, but as to gastric ulcer, though the process in spoken of in this connection, yet it would seem that the facts upon which this statement is based are rather meagre. Extreme rapidity of development and coincident marked emaciation and cachexia must be demonstrated to make clear the existence of malignant disease. The diagnosis might have an important bearing upon the question of operation. The cause of the marked peristaltic movements seemed obscure. Dr. R. had often seen these in connection with pyloric obstruction, but here there was no mechanical narrowing of the outlet.

A seeond case was reported as a contrast to the former, in which the rapid development of painful gastric symptoms with equally rapid failure of flesh and strength in an elderly man lead to a diagnosis of cancer. A small, tender lump lay just under the xyphoid cartllage and projected downwards with the contractions of the diaphragm This was believed to be in the liver. The autopsy showed a contracted stomach, with thick walls, infiltrated with the malignant growth. No tumor. The lump referred to was a secondary nodule in the left lobe of the liver.

The third was a case believed to be duodenal ulcer. The patient was a large-framed young farmer, aged 23. Had suffered from dyspepsia and pain in left side for six years. Soon after, had an attack of melæna, passing large quantities of blood,

fainted twice, and stayed in bed two months. Dyspeptic symptoms have persisted ever since, with weakness. In November last had a repetition of the intestinal bleeding, and when seen here soon after was blanched and feeble. It was thought that all other possible causes of the hemorrhage could be excluded, and the diagnosis was discussed with the result that the existence of a duodenal ulcer seemed certain. The situation of the pain was remarkable, being under the left hypochondrium. Examination of the stomach proved it to be in a state of moderate dilatation, succussion-sounds being very loud. He vomited occasionally, and sarcinæ ventriculi were present. The explanation of this was that a partial stenosis of the duodenum exists and acts in the same way as a narrowing of the pyloric orifice. The condition is mentioned as one of the rare sequels of dnodenal ulceration.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, March 4th, 1889.

T. K. HOLMES, M.D., PRESIDENT, IN THE CHAIR.

Fatty Placentæ.—DR. DUNCAN exhibited a portion of a placenta which had undergone fatty degeneration. The patient, apparently perfectly healthy, aborted at the seventh month, the child being dead some time. There was no history of constitutional syphilis, although a sister of this patient had had premature labors.

DR. TYE mentioned that he once had a placenta sent to him similar to the one presented to the Society, the patient from whom it was delivered having miscarried seven times.

Pathological Kidney.—The PRESIDENT exhibited a pathological kidney and a large calculus removed from it, and read notes of the case. M. G., aged 73, good history, about seven years previous to her death, noticed an enlargement about the size of an orange on her right side, on a level with the umbilicus. The tumor grew gradually, but gave her no inconvenience for six years, her health during this time being good, when it began to hurt her to lie on her right side. For about three years she had noticed at intervals of a week or two a discharge of a tea-

spoonful of pus after urinating and standing up. She consulted me about two months before her death. For ten weeks previous to this she passed thick pus with her urine every day. The quantity of urine is about a pint daily; specific gravity 1026, and acid. There is no pain about the bladder or urethra, and she does not require to urinate more frequently than at any time during her life. The tumor extended from the lower border of ribs to the anterior superior spinous process of ilium and from the dorsal regions to median line in front. It is hard, smooth, and somewhat tender; only slightly movable. The symptoms until her death were slight rise of temperature, night sweats, and progressive emaciation. About a week before she died she passed considerable pus from her bowels, and later, vomited pus. The autopsy showed the right kidney enormously enlarged and adherent to liver, stomach, colon and to all organs in its vicinity. On removal it weighed 3¼ lbs. The pelvis was large, filled with thick pus, and contained a large calculus, which was irregularly branched, corresponding to the shape of the calyx, and weighed 180 grammes. The mass of the organ consisted chiefly of fatty tissue and several pus cavities separated by fibrous partitions.

Œsophageal Obstruction.—Dr. Bray read the history of the following case: J., aged 73, came to his office a few weeks since with a piece of meat in his throat which he was unable to swallow. When a boy the patient had swallowed a quantity of lye, which produced great destruction of tissue in the throat, resulting in the formation of a stricture near the cricoid cartilage and a pouch just above it. Since the accident he has had great difficulty in swallowing solids and even fluids, having always to drink slowly and a small quantity at a time. During the past ten or twelve years he has been called as many times to remove pieces of meat, bread, apple, etc., which he had always found lodged in the pouch referred to. This was accomplished with the ordinary sponge and hair probang either by getting below the foreign body and extracting it or more frequently by propulsion into the stomach. On this occasion it was pushed downwards, requiring much more force than on any previous occasion. On removing the probang and giving the patient some water to drink,

he found, much to his surprise, that after swallowing about a wine-glassful it was regurgitated, the fluid did not enter the stomach. The probang was again introduced, and after passing it about 13 inches, a second obstruction was met with, which could not be overcome by using considerable force. He was seen again the next day, his condition being unchanged. Dr. Duncan, who also saw him, suggested the use of apomorphine hypodermically in hopes of dislodging the foreign substance, but on account of his age and general debility it was concluded not to do so. Dr. Duncan also suggested the use of papoid or papaine for the purpose of digesting the impacted meat. Nutrient rectal enemata were ordered and a hypodermic injection of morphine given. The following day the patient was found very weak, still unable to swallow, and complaining of much pain at the seat of obstruction. After consultation with Dr. Tye, a tube of a stomach pump was introduced into the œsophagus as far as the obstruction, through which hot water was injected by an ordinary enema syringe until it regurgitated through both the tube and alongside of it. After continuing this for about five minutes, shreds of meat were seen in the water, when the tube was withdrawn, and on administering some water it was found that he could swallow as well as he had for years.

Discussion.—Dr. McKeough thought the case unique and instructive, and suggested that the careful use of graduated bougies might ward off for a time a similar difficulty, and referred to a patient at one time under his care who had stricture of the œsophagus from the effects of ammonia, and who lived in comparative comfort by the periodical passage of bougies. He also mentioned a case of complete paralysis of the œsophagus following diphtheria, the patient being nourished by stomach tube and rectal injections.

Dr. Duncan considered emetics of value in such cases, and referred to a case of œsophageal obstruction due to diphtheritic paralysis, in which the patient was nourished three weeks by rectal enemata without losing any weight.

Dr. Tye thought if the obstruction in Dr. Bray's case had not been relieved by artificial means it might have undergone

spontaneous disintegration in time. He thought a digestive ferment, as suggested by Dr. Duncan, would have acted well. But all other means failing, gastrotomy should be performed. He mentioned a case of stricture of the œsophagus under the care of a friend in Detroit that had been greatly relieved by electrolysis.

DR. CHARTERIS could not agree with Dr. Tye in his spontaneous disintegration idea, nor with Dr. McKeough in the use of bougies.

DR. HOLMES thought well of the use of digestive ferments. Great care should be exercised in such a case in passing bougies. Thought it could have been removed easily if a Bigelow's evacuator had been attached to a soft, flexible stomach tube with a large eye, and used as in removing calculi from the bladder.

Stated Meeting, March 25th, 1889.

T. K. HOLMES, M.D., PRESIDENT, IN THE CHAIR.

Vesical Calculi.—DR. HOLMES exhibited a number of calculi which he had removed a short time ago from a man, 49 years of age, by perineal lithotomy. They were thirteen in number, weighing in the aggregate 1320 grs., and were of the laminated phosphate of lime variety with lithic acid nuclei. Attempts to sound the bladder were so painful that it could not be done until anæsthesia was induced, when the presence of the calculi was detected and the operation proceeded with. The quantity of pus in the urine had been very great for a long time, and several surgeons who had seen the case had been of the opinion that it came from an unclosed prostatic abscess, as they were unable to detect stone. The case made a good recovery, but there is still inability to retain urine longer than two hours. There is now neither pus nor mucus in the urine. Dr. H. remarked that in such cases it is always well to examine the bladder under an anæsthetic before pronouncing a positive diagnosis. The presence of the calculi might have been easily mistaken for enlarged prostate by digital examination per rectum.

Puerperal Eclampsia without Albuminous Urine.—DR. MCKEOUGH read notes of a case of puerperal convulsions asso-

ciated with marked lithæmia, but unaccompanied with albumen in the urine. The patient, a German woman aged 28, primipara, had, previous to her marriage, enjoyed perfect health. No history of hysteria or fits. During her pregnancy suffered from disordered digestion, constipation, neuralgic pains in various parts of her body, and slight œdema of her feet and legs. Her urine was examined frequently; it was usually scanty in quantity, high-colored, acid, specific gravity about 1030, and depositing on standing a quantity of amorphous lithates. No trace of albumen, even with the most delicate tests, could be discovered at any time, nor casts with the microscope. She had a normal but tedious labor. During labor her temperature was 100·5°F., the day following it was normal, and she felt very well. On the third and fourth days there was another slight rise, it afterwards became normal, and remained so. She also had a slight diarrhœa, for which a few powders of rhubarb and calomel were given. On the ninth day she got up, but did not feel well, her skin was sallow in color, tongue furred, and urine high-colored. On the morning of the tenth day Dr. McK. was hastily summoned and found his patient partially comatose, restless and moaning, with a bluish countenance and a bloody froth about the lips. While questioning the attendant, from whom it was learned that the woman had evidently had a fit, she was again suddenly seized with a violent convulsion. Twitchings of the face were rapidly followed by tonic spasms of the whole body, and this in turn succeeded by clonic spasms—a typical eclamptic seizure. One-third of a grain of morphine was injected hypodermically. The urine, more than half a pint being then drawn off with a catheter, was found to be highly-colored, acid, but not a trace of albumen could be found in it. Within two hours she had three more severe fits; during the most of this time she was partially anæsthetized with chloroform. A copious rectal enema was given and a large dose of Epsom salts. As soon as the bowels were thoroughly moved she became conscious and had no more convulsions. Salicylate of soda and salts were administered for a few days and her recovery was rapid and satisfactory.

Epigastric Pains.—Dr. Duncan read a most interesting

paper with this title. The form of epigastric pain to which he confined his remarks is, as he stated, seldom described, not unfrequently suffered, and in medical literature wholly overlooked, viz., pain which occurs at the close of gastric digestion, one or three or even more hours after eating, and generally relieved promptly by taking a fresh supply of food. In illustration he gave the notes of four cases:

I.—A. K., aged 38 years, active habits, nervous temperament, general health good, well nourished, has suffered from pain in the stomach for years. When he first consulted Dr. Duncan his bowels were slightly constipated, appetite fair; suffered from pain sometimes severely, occurring always from two and a half to three hours after meals; these pains always relieved by taking food; there were also acid eructations after meals. Pressure over the epigastrium elicited marked tenderness, especially to the right of median line. He states that he is much better when not actively employed, and markedly worse when worried over business.

II.—J. F., aged 54, farmer, a thin, restless man, married; habits active, nervous, anxious temperament; has passed through a good deal of mental trouble; general health previous to present attack fairly good; pain intense and circumscribed, coming on one to two hours after eating, promptly relieved by taking food; constipation marked; appetite good; no vomiting; always feels weary; tenderness in epigastrium and over liver.

III.—W. A., clergyman, aged 36, a man of intense devotion to study, of extraordinary powers of sympathy, and great energy. For six years has occasionally suffered from pain some time after eating; these attacks apparently resulted from special labor involving great mental effort. Apart from these attacks general health has been good. During the three months previous to the time Dr. D. saw this case he had suffered from great pain in the epigastrium about three hours after eating, the night attack always proving most severe, being then almost beyond endurance at times. Relief is afforded by taking anything into the stomach, though the relief is not always complete. Vomiting generally gives great relief. Epigastric tenderness extensive, especially

towards the right of median line. Bowels usually constipated, appetite generally good.

IV.—T. S., farmer. Was called to attend him for an attack of localized peritonitis which had been produced by driving rapidly over a very rough road. Previous history corresponded closely with the cases just related.

Dr. Duncan stated that he formerly accounted for the occurrence of pain at the close of stomach digestion by supposing the gastric mucous membrane to be in a sensitive condition, so that any contact became a source of irritation and pain, but the fact that in almost all these cases pain is relieved by vomiting made him give up this hypothesis. He now believes the morbid condition giving rise to this symptom lies not in the stomach itself, but at the pyloric orifice, or more generally in the duodenum, and the lesion is generally ulceration. Early during the digestive process the more completely dissolved parts of the meal pass into the duodenum, the earlier products of gastric digestion are not nearly so acid as the later. The alkaline bile is stimulated to active flow by the lately ingested meal meeting and neutralizing these moderately acid first products. So digestion goes on till near its close so far as the stomach is concerned, then that organ makes a final and forcible effort to empty itself of the remaining highly acid contents, which, either from deficient peptic power or the unsuitableness of the ingesta for gastric digestion, have remained only partially dissolved. This coarse acid material is forced into the congested or ulcerated duodenum, the secretion of the protective, because alkaline bile by this time is failing, and the rough and acid remnants of gastric digestion tortures the raw surfaces in a way known only to those suffering from duodenal ulcer or allied condition. The taking of more food into the stomach stops the pain, because it stimulates a fresh flow of alkaline bile and arrests the stomach's efforts to close gastric digestion.

Discussion.—Dr. Rutherford could not agree with the writer of the paper as to the pathology of the symptom of pain in the cases reported, but thought it rather due to extreme acidity of the juices of the stomach acting on the lining membrane of that

organ. If due to duodenal uleration, he thought blood would pass through the bowels and pain would not be central, but in duodenal region. His treatment was the frequent administration of food in small quantities, giving alkaline preparations on the advent of pain; also with each taking of food stomach tonics—hydrochloric acid, quinine, and strychnine.

DR. BACKUS would rather agree with Dr. Rutherford's explanation of the cause of this kind of epigastric pain. Treated them successfully by the administration of food on the advent of pain and administering aromatic spirits of ammonia and Tinct. Camph. Co.

DR. BRAY met with these cases quite frequently; thought they were the most common form of indigestion; considered it due to extreme acidity of the gastric juice. Treated them successfully by rest, the use of rectal enemata of peptonized foods, and the administration in small quantities of peptonized milk by the stomach and large doses (20 to 30 grains) of bismuth.

DR. MCKEOUGH had met with well marked cases, similar to those reported, but in his experience they were not common. He believed with Dr. Duncan that the pathological lesion causing the distinctive symptoms of his cases was in the duodenum, but scarcely thought that in the cases that had come under his observation there was ulceration. Dr. Osler had pointed out in his paper on duodenal ulcer that the symptoms were variable and the diagnosis almost always problematical; in Dr. Duncan's cases and in the few similar cases he had seen the symptoms bore a distinct resemblance. In his cases there was no hemorrhage, and antacids gave no immediate relief.

DR. CHARTERIS believed these cases were due to inflammation of the stomach.

DR. HOLMES believed these cases to be both rare and rather difficult to cure. He had observed in all the cases he had seen a decided general neurotic condition, and believed the pain to be due very often to a local hyperæsthesia of the duodenum. In duodenal ulcer the symptoms were less amenable to treatment, while in cases of duodenitis which he had observed the pain is more severe, vomiting more common, and catarrhal jaundice

generally present. Strict regulation of the diet produces a marked beneficial effect in duodenal ulcer and in duodenitis, but there is a class of cases presenting the same symptoms of pain in which a strict regimen has seemed of little use. Treatment that had given the most satisfaction in his hands had been that directed to the general nervous system. The neutralizing of excessive acidity of the contents of the stomach by the exhibition of soda bicarb. and other alkalies had not in his experience even temporarily relieved this peculiar pain.

DR. DUNCAN was delighted with the result of the discussion. The symptom was not a common one, but was a recognized symptom of duodenal ulcer. His *first case* recovered, subsequently the pain, etc., returned, and the patient died from peritonitis resulting from a perforating ulcer of the duodenum, revealed by an autopsy. His *second case* recovered perfectly. His *third case* was not amenable to treatment; was seen by Sir Andrew Clark, who diagnosed cancer. The post-mortem revealed stricture of the pylorus and deep ulceration in the duodenum, but no cancer cells were discovered with the microscope. His *fourth case* still lives, but only by the greatest care can he be kept from a recurrence of the attacks. In ulceration of the duodenum there was an hyperæsthetic condition of the mucous membrane; it might exist without ulceration and give rise to these symptoms. In the treatment of these cases he found that worry and anxiety aggravated and brought them on; he therefore advised rest from toil, discountenanced labor and fret, regulated diet, gave nerve tonics, and bismuth in large doses.

Correspondence.

A FEW NOTES FROM ABROAD.

GRASSE, ALPES-MARITIMES, FRANCE.

This is an interesting town from a medico-hygienic point of view. Built more than a thousand years ago, it looks as if no change had ever been made in its architecture. At first sight the query arises: How can people live in houses so closely crammed together? The mortality must be high, and how is it that typhoid and cholera do not carry off the whole population? The streets are extremely narrow; in most of them two carts could not pass, and in very many no cart could enter at all. The houses are very high. Sunlight is perpetually excluded from these narrow lanes, and to take a walk into the old town is to experience the sensation of plunging into a cold bath. Yet generations have lived, moved, and had their being in these cold damp streets and the survivors are healthy and strong, and zymotic disease does not appear to be unusually prevalent. The answer to the query presents itself after a few weeks observation of the manners and customs of these southern people.

In the first place, the house is only used as a shelter for sleeping in. Early in the day everybody is in the street. The women do all their household work at the doorstep or in the roadway. They knit, they sew, they roast coffee, supply nourishment to the baby—all in the open air. The family washing goes to the open washing-place in the principal square of the town, where fifty or one hundred housewives are at work washing their linen in the pool from the hot spring which nature has provided for them. There is no plumbing in the houses at all. The water for household use is carried from the public fountains and public urinals are numerous and obtrusive. Windows are open all the year round, and ventilation consequently is free. In the spring the famous mistral comes, a piercing, dry, N.W. wind, which blows under a clear sky and a hot sun, drying up everything and thereby acting, as is popularly thought, as a disinfectant for the whole face of the country.

Grasse makes perfumes for all the world, and all the country round is cultivated almost entirely for the production of flowers to supply the numerous factories and distilleries. The process is not a very interesting one. Prussic acid is also manufactured on a large scale.

The neighboring country brings up recollections of materia medica lectures. The tall and graceful eucalyptus tree has been introduced throughout all the Riviera. The best trees are at Nice, where they are very stately and have the appearance of water shooting up from a fountain. Then there is the juniper and the sarsaparilla, the orange and the lemon, and the ensiform leaf of our old friend the aloe, which is everywhere planted.

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Some months ago I remember reading in the *Lancet* a very sensible little article, the writer of which pointed out that in the great attention and study now devoted to matters of personal hygiene there was a danger of making people introspective and careful of themselves to an uncomfortable extent. At the time it seemed to me that the writer was alarming himself about an imaginary evil, but further acquaintance with the British public, especially that part of it which spends the winter abroad, has convinced me that the warning was none too soon, and that the writer thoroughly understood the manners and customs of his countrymen and (especially) of his countrywomen.

Fads are now more than ever the fashion. In this journal we have nothing to do with fads political, fads literary, or fads scientific, but the fad sanitary belongs to us and attracts our attention. Our ancestors had fads, at least those of them who were well enough off to afford this expensive luxury. The fortunes made out of watering places depended on the prevailing fads of the age. When the *grandes dames* had the vapors, which, I take it, is old English for nervous prostration, they took the waters at Bath or Epsom. Now-a-days the Riviera claims its thousands of well-to-do invalids, and their fads come with them.

Drain faddism is very prevalent. The victim is most particular in his enquiries about the drainage of his hotel, and is often satisfied by the showy appearance of the plumbing, while the ulti-

mate destination and final outflow of the soil-pipes are dark mysteries. A fine sense of smell is in course of time developed, and life is passed in a state of sniffing doubt and suspicion. The fact is lost sight of that deadly drain gases do not necessarily smell, and every odor, whether arising from cooking or anything else, is not necessarily a cause of disease or a reason for making one's self unhappy.

The danger of drinking cold water has been well impressed upon the British mind. At one hotel where I spent two months public opinion was divided, one party holding that the table-water and the house air caused diarrhœa and the other party denouncing both as a cause of troublesome constipation, but all agreed that the dangerous quality of the water rested in its undiluted condition, and that it was made less dangerous by the addition of some thin French wine. The whiskey fad originated with the favorite advice of an eminent London consultant, who cautioned his patients against the too free use of strong wines and substituted weak whiskey and water. This kind of faddist provides himself with a bottle of Highland whiskey at the table d'hôte, and, as in one particular case in my mind's eye, seeks gastric consolation and exercises prophylaxis against zymotic infection by the measured addition of a dessert-spoonful of the seductive liquid to a tumblerful of water, a dose too small for appreciable ordinary effect and a million times beyond the homœopathic measure of dilution. Another mode of avoiding the microbes was that practised by an English family at the same hotel. Provided with spirit lamps they boiled the water before meals and appeared each carrying his own water-bottle. This practice was certainly based on a good, solid, scientific foundation.

An elderly gentleman and his wife ate no bread except that which was baked under their own supervision, and made their appearance at the public table loaf in hand and no doubt wondered that destruction did not come upon their fellow-creatures who carelessly ate what was put before them and were thankful.

Hot water faddists are of two classes. Those who drink hot water by itself and those who drink equal parts of vin ordinaire

and boiling water. Looking down the table one sees little silver-plated jugs here and there indicating the vicinity of the hot water drinker.

The greatest fad of all is that which relates to clothing, and is commonly known as Jaegerism. Jaeger's underclothing was put upon the market some years ago, and now the sale of it is enormous. According to the Jaegerists, not to be encased in Jaeger is foolhardy and sinful. But the principle is a good one and depends on the idea that man being an animal and, for many reasons which space will not allow me to enumerate, unable to go about in the clothes with which nature has provided him, should, if he clothe himself at all, clothe himself in garments wholly derived from the animal kingdom. It does not seem that the Jaegerites have gone into man's ancestral history to find good reasons for urging the purchase of their underwear; if they did they might argue that man when he had hair all over his body and was arboraceous in his habits had no need of patent underwear and of hygienic haberdashery, but that having reformed, cast off his hairy covering and taken to clothes, he should adopt an encasement as closely resembling the ancestral fashion as modern ingenuity can contrive. No one will doubt that good woollen underclothes are likely to be of great service, and the more so the better the quality, but that Jaeger and only Jaeger will afford comfort and protection I deny. I will admit that a Jaeger pair of drawers and a Jaeger undershirt are comfortable, and so are Jaeger socks, especially if digitated, but I dispute the special hygienic advantage of a Jaeger collar, a Jaeger necktie, or a Jaeger pecket-handkerchief.

R. L. McD.

Selections.

Internal Administration of Sulphur.—Sir Alfred Garrod recently (April 6th, 1889) published a paper on "Some Chronic Diseases of the Alimentary Canal and Liver, also of the Skin and Articulations, and their Treatment by the long-continued exhibition of small doses of Sulphur given in the form of the Compound Sulphur Lozenge." The author has long been accustomed to administer sulphur in very small doses, and for a lengthened period of time, in the treatment of the above-mentioned disorders. He gives a short account of the results of such treatment. Sulphur is an old remedy, and one in which the public has great faith. It is an element normal to the system, and enters into the composition of some of the most important proximate principles of the animal body, as fibrin and albumen, and also of taurocholate and sulphocyanide of sodium. The form most suitable for administration is that of a lozenge containing five grains of the milk of sulphur and one of cream of tartar. This lozenge is far from disagreeable, contains sufficient sulphur for therapeutic purposes, and patients are willing to take it for an almost indefinite period of time. In many cases one lozenge a night is quite enough to effect the desired end; if required, two may be taken at bedtime, or one each night and morning.

Physiological Effects.—Sulphur stimulates the normal peristaltic action, and in moderate doses becomes a laxative. It is probable that the stomach is unaffected, owing to the acidity of its secretion, but in the duodenum alkaline fluids convert it into a soluble sulphide which is absorbed by the portal vessels and passes first through the liver and afterwards into the general circulation by the hepatic vein. From the blood it is eliminated by the skin as well as by various mucous membranes. The cream of tartar in the lozenge helps to prevent the formation of any soluble sulphide in the stomach, and hence the absence of sulphurous eructations. Any soluble sulphur, however, which reaches the cæcum and colon, where the reaction is again acid, is apt to evolve hydrogen sulphide and impart odor to the contents of the lower bowel.

Therapeutic Effects on the Alimentary Canal.—In the majority of cases a single lozenge taken every evening prevented the necessity of the administration of ordinary aperients, though not actually purgative. Distinct purgative effects are exceptional. The secretion of the liver is often increased in sluggish action of that organ, as is shown in the altered character of the fæces, which have been brought from a pale clay-color to the normal state. Although the action of the sulphur is slow compared to mercury, still in chronic torpid conditions of the liver the advantage of the sulphur over the mercurial treatment is undoubted. When we consider that the most important salt of human bile—namely, taurocholate of soda—is a sulphur compound and one containing a large proportion of that element, it might almost have been anticipated that the administration of sulphur for a long time would produce a marked alteration of the biliary secretion. In the case of sodium, the other base which is united with both the taurocholic and glycocholic acids, we have good evidence that its influence on the secretion of the bile is well marked, hence in hepatic and stomach disturbances we usually select sodium salts in preference to those of potassium or lithium. In hemorrhoidal conditions not suitable for surgical interference, and in some cases of bleeding from the rectum, the most marked beneficial effects from the continuous sulphur treatment have been seen.

Diseased Condition of the Pulmonary Passages.—That sulphur acts upon other mucous membranes besides those of the alimentary tract is made evident by the odor of sulphurreted hydrogen which can sometimes be detected in the breath. Experience has shown that certain forms of bronchitis, especially in the aged, are beneficially influenced by its administration.*

Diseases of the Skin.—Sulphur is eliminated by the skin. In acne, psoriasis and prurigo it is useful either alone or with some other form of treatment; also in some forms of localized eczema, especially in those connected with the gouty diathesis, as pruritus ani.

Morbid Conditions of the Muscular System.—Sulphur has

* See Graves' Clinical Lectures.

long been employed in chronic muscular rheumatism. It is in such forms of muscular affections which are benefited by guaiacum, serpentary and such-like stimulants that sulphur is found to be most efficacious. In the cramps of gouty persons relief is quickly afforded.

Chronic Articular Disease.—Dr. Garrod first prescribed sulphur in small and continuous doses for the relief of the disease formerly designated rheumatic gout, but now called rheumatoid arthritis. "From my experience I feel convinced that sulphur is useful in some chronic affections of the joints, although, as yet, I cannot say I have depended altogether on the remedy, but I have made it only part of a therapeutic plan, in which it has been often associated with powerful agents such as iodine and arsenic. The more chronic the form of articular disease the more likely is sulphur to prove beneficial. In true gouty states of the joints, when the disease is both chronic and asthenic, sulphur is often a valuable adjunct to other remedies."

Trephining for Traumatic Lesions of the Skull. By Dr. Herman Th. Seidler, St. Petersburg, Russia.—During the last two and a half years there were admitted to the Obukhovsky Hospital 38 cases of traumatic lesions of the skull, of which in 23 the cranial vault was injured (five cases referred to compound fissures, two to subcutaneous fractures, and sixteen to compound fractures). In seven cases primary trephining was performed, with three recoveries and four deaths; and in three secondary, with two recoveries and one death. The remaining thirteen cases were treated without trephining; nine of them recovered, four died. In seven out of the nine fatal cases, death was caused by a simultaneous severe lesion of the brain, the patients dying in from a few hours to two days; in the eighth case by meningitis, and in the ninth by unrecognized hemorrhage from the middle meningeal artery. Of 15 cases of lesions of the cranial base, five recovered and ten died. Analyzing his cases, Dr. Seidler arrives at the following conclusions:—

1. Cerebral symptoms in cases of traumatic injuries to the

skull constitute an indication for a primary trephining only in the presence of an unmistakable train of symptoms pointing to an intracranial hemorrhage from the middle meningeal artery.

2. In the absence of the hemorrhage, no trephining is indicated in cases of subcutaneous fractures of the skull.

3. Depression of fragments by itself cannot be regarded as an indication for the operation.

4. A possibly early primary trephining should be resorted to, either for arresting intracranial hemorrhage, or for antiseptic purposes in cases of compound fractures (especially of comminuted, fenestrated, etc.). In the latter, the operation secures a thorough disinfection of the site of fracture and as thorough an antiseptic management of the wound. The operation includes the removal of free fragments, elevation of depressed pieces, trimming uneven edges, etc.

5. A secondary trephining is indicated even in the presence of symptoms of incipient meningo-encephalitis. The latter may be sometimes cut short by the operation.

6. In subcutaneous fractures, secondary trephining is indicated when there are perfect symptoms of cerebral irritation (epileptoid fits) depending upon depressed fragments.

7. In cases of fractures penetrating into the frontal sinuses, antiseptic tamponade should be preferred to suturing, since the sinuses stand in communication with the nasal cavities through which atmospheric pyogenic microbes may easily enter; besides, suppuration of the sinuses becomes more dangerous when the cutaneous wound is closed by sutures.

8. The safest and most reliable hæmostatic means in cases of wounds of cerebral venous sinuses is constituted by plugging the injured sinus.

9. The term "trephining" should be applied only to an artificial opening of an intact skull; the operation on a fractured skull should be named "*débridement.*"—*Vratch*, No. 2, 1889; *Annals of Surgery*, May, 1889.

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DIDACTIC LECTURES.

Very many years ago, before any of the readers of the MONTREAL MEDICAL JOURNAL were born—that is, at or about the beginning of this century—the didactic lecture was regarded, and very properly too, as a useful institution. Now-a-days that usefulness has almost entirely gone. At that period medical schools such as those of the present day could hardly be said to exist. The medical student, at a very early age, was apprenticed to a country surgeon, and after acquiring a rough and ready general acquaintance with the details of everyday practice, was sent up to London or some other capital to "walk the hospitals" and to attend the lectures of some one or other of the hospital men at the time eminent in medicine or surgery. There was no clinical teaching in those days, and the lad whose parents were not rich enough to buy him a dressership with Sir Astley Cooper or Mr. Abernethy, or to have him counted as one of the private pupils of a leading surgeon, had to content himself literally with "walking" the hospital, for little instruction did he get there. But then the didactic lecture was at the summit of its usefulness. It must be first remembered that text-books at this time were not of the kind now met with in the hands of the student. Take those of merely fifty years ago—Bostock's Physiology, a bulky mass of ill-digested facts and crude theory, without a single illustration or diagram, and the Edinburgh or Dublin Dissectors with not a plate in them, Cullen's "First Lines" and Hosack s Practice of Physic would not bear comparison with Erichsen's Surgery or Bristowe's Medicine. Then it was that the student found his notes of real value, representing, as they did, the crumbs which fell from the rich man's table, the prac-

tical observations of the man of experience which must be stored up for future use. Hence the great popularity of Cooper's or Abernethy's lectures. Their opinions were not written in the language of any nation. There were in those days no journals to report their lectures or to record their speeches at a learned society. The popularity of these giants of surgery led to the general establishment of what we now call medical schools, and the giving of lectures in all the branches of medical education became general.

Fifty odd years ago, when McGill College Medical Faculty came into existence, the model system of the period was that of Edinburgh, where each professor gave his 120 lectures per annum, collected his own fee, and examined his own class. What was good and useful in 1835 may not be either good or useful in 1889. The system has been adopted by all Canadian schools, but now it is time to look into it and to see whether improvement can be effected. The question of extra academical examiners has been settled in Ontario, but the didactic lectures in all its uselessness is in full swing throughout the Dominion. We would like to show that the Canadian student is over-lectured and under-taught. Not but that there are many men connected with our schools able and willing to do real teaching, but the time of the student is so taken up by the number of lectures he is obliged to attend, that laboratory and clinical work have to suffer. Why should a student be compelled to sit out two courses of lectures on the same subject? Either his first course is too difficult or his second course too easy. As a matter of fact, as we all know, the student usually leaves out in his first session all that is difficult, in the hope that he will find it all easier in his second year. A solution of this difficulty has been arrived at in McGill College by the introduction of a graded course in two of the primary branches; that is, one set of lectures is given for first year students and a separate set for second year students. This is as it should be. But why have so many lectures at all? When such excellent handbooks are within everybody's reach, why should not the lecturer advise one such book as a standard and with that as a test illustrate by diagrams, models and experiments all that he considers necessary and important in the study of the subject. Why should he think it necessary

to compile a summary of his subject and administer one hundred daily doses of it to his class. The "coach" can teach a subject more rapidly and effectively than can a college lecturer. He advises the student to read carefully such and such a chapter of a standard text-book, his hour can be devoted to the illustration of and the examination on that chapter. The college lecturer will spend three hours over the same ground and not attain as good a result. Hence in schools where examinations are extra-academical the coach has completely pushed the college lecturer to the wall, and we may yet again see private schools of medicine become popular.

The profession must soon take steps to effect a change in the law regarding the amount of attendance on lectures, and the schools will, sooner or later, have to adopt a plan of teaching quite different from that in vogue in the past. Students must understand that they cannot depend upon their hastily-written notes for the solid basis of their professional knowledge, but they must take in hand some sound text-book, master it thoroughly, and then look to the college lecturer for illustration and demonstration of the truths contained in it.

THE CAUSE OF TYPHOID FEVER BEFORE THE COURTS.

The *Lancet* reports an action which was lately brought in the County Court by a lady against St. Ann's Hill Hydropathic Establishment, Blarney, near Cork, to recover damages for the illness of one of her sons from typhoid fever whilst occupying a room there. Evidence was given to prove that the room occupied by the youth was in the close vicinity of a closet whence foul odors were sometimes noted, and which had been shown not to be free from the escape of sewer gas. On the other hand, there had never been a case of typhoid fever contracted in the institution before, and it was contended on behalf of the plaintiff that the disease in this instance might have been contracted at Cork. Dr. Gelston Atkins, who was called to see the case and deposed to the fact of typhoid fever, was pressed by the presiding judge as to his opinion respecting the nature of the disease. Dr. Atkins affirmed that he believed it to be of a bacillary nature, and only transmissible from a pre-existing case, but that in this

instance it must have been exceptionally developed spontaneously. The judge clearly laid down that the agreement of all the scientific witnesses as to typhoid fever being a germ disease was inconsistent with the view taken by the plaintiff, and the jury found for the defendants, replying in the negative to the three questions put to them by the judge—viz., Were the closets improperly constructed so as to be unwholesome? Was there negligence and was the room unwholesome as distinct from unpleasant? And was the fever caused by any circumstances existing on the premises?

ETHER AS AN INTOXICANT.

In certain parts of Ireland ether is taking the place of whiskey as an intoxicant. The Synod of the Church of Ireland have petitioned the Government praying that the ether traffic be regulated and restricted. This form of vice is chiefly prevalent in the counties of Londonderry and Tyrone. In the former the police reported that ether was constantly used as an intoxicant, and the resident physician of the lunatic asylum reported that in his district insanity is produced in many instances by an indulgence in this pernicious habit combined with other causes. Ether drinking in the County Tyrone is confined to two localities according to the police report, and in the local lunatic asylum no cases have been observed which could be referred to this cause.

THE DEAN OF THE MEDICAL FACULTY OF McGILL UNIVERSITY.

The Board of Governors of McGill University, at a recent meeting, appointed Dr. Robert Craik to the position of Dean of the Medical Faculty of McGill University, rendered vacant through the death of the lamented Dr. R. P. Howard. This appointment has given unbounded satisfaction to his colleagues in the Faculty and University, and will, we are confident, be received with equal pleasure by the hundreds of his former pupils, now scattered far and near. Dr. Craik's connection with McGill University has been a long and prominent one. In 1856 he was appointed Demonstrator of Anatomy, which position he

held until 1861, when he succeeded to the chair of Clinical Surgery. In 1867 he followed Dr. Wm. Sutherland in the chair of Chemistry. Students and graduates of the University prior to the present decade have all lively and pleasant recollections of him as the genial and accomplished Professor of Chemistry of that period. Although Dr. Craik, owing to the pressing claims of a large practice, resigned his chair, becoming Emeritus Professor in 1879, he has ever since taken a most active interest in all matters connected with the University, and has been ever ready to support measures for extending its sphere of usefulness. We feel satisfied that under the able guidance of the newly-appointed Dean, the Medical Faculty of McGill will, as in the past, continue to promote and extend the cause of higher medical education.

MEDICAL FACULTY OF McGILL UNIVERSITY.

Annual Convocation.

The annual convocation for conferring degrees in medicine at McGill University was held in the William Molson Hall, on Monday, April 1st. The large room was filled to its utmost capacity, but over all there seemed an air of depression and gloom from the recent bereavement that McGill had sustained. The Acting Chancellor, Mr. J. H. R. Molson, presided, and at his left sat Sir William Dawson, and on his right Dr. A. Johnson, Dean of the Faculty of Arts. There were also on the platform Rev. Prof. J. Clarke Murray, Rev. Principal McVicar, Rev. Dr. Shaw, Rev. Principal Barbour, Rev. Dr. Cornish, Mr. Justice Davidson, Mr. Justice Church, Drs. Ross, Stewart, Mills, Girdwood, Craik, Ruttan, Roddick, Shepherd, Gardner, Cameron, Kelley, Wilkins, Fulton and Finlay, Profs. Darey and Lafleur, Messrs. Brakenridge and J. R. Dougall.

Dr. Craik, who was filling Dr. Howard's place, rose to read the list of those who had graduated and of those who had obtained prizes. Before doing so he said: My appearance here to-day to announce the results of the session of the Medical Faculty which has just closed is a reminder of the great loss which the

faculty has sustained by the lamented death of Dr. Howard, our late Dean and senior Professor of Medicine in this University. It is not for me nor is this the occasion to gauge the length, breadth and depth of the sorrow which has been caused in all classes of the community by Dr. Howard's untimely death ; but I cannot refrain from saying a few words concerning more particularly his relations to the Medical Faculty itself. Connected as he has been with the faculty for more than thirty years as one of its most successful and active teachers, beginning at the bottom of the list as demonstrator of anatomy and winning his way upward till he reached the highest position in the faculty as dean and senior professor of medicine, his career has been such as to win for him the admiration and affection of all with whom he was associated, from the humblest student to the oldest of his colleagues, as well as to all those associated with him in the other departments of the University. You, gentlemen, graduates to-day, but for the last four years students of the University, have often been cheered and your labors lightened by his rare courtesy, his kindly sympathy, his ever ready word of encouragement, and his warm smile of approval, and wherever your lot may be cast, you will always associate with your memories of McGill University the affectionate and active interest displayed towards every one of you by your late Dean. His services to the Medical Faculty would be difficult to over-estimate. To his rare gifts as a teacher were added unfailing tact and sagacity as well as executive ability and administrative talent of a high order. His uniform courtesy and kindliness of manner often disarmed opposition where more energetic means would have failed. But he was also instrumental in aiding the Faculty in a more direct and material way. He was chiefly instrumental in procuring for the Faculty its first and only endowments in the shape of the Campbell and Leanchoil memorial funds. These funds contributed by our citizens and by the ever generous benefactor of this University, Sir Donald A. Smith, to commemorate the connection of the Faculty with its former Dean, Dr. George W. Campbell, have been of the very greatest service to the Faculty. Indeed, I may say that it would have been impossible for the Faculty to have maintained its position in the front rank

among medical schools without them. The increased income derived from these endowments has not been frittered away in useless architectural ornamentation or in useless displays of any kind, but under Dr. Howard's guiding hand they have been utilized to the utmost in extending the usefulness of the University, first, by providing additional and much needed class-room accommodation; secondly, by enlarging and increasing the equipment of our laboratories for important practical work chiefly in the departments of physiology, pathology and practical chemistry; and, lastly, by supplementing by small amounts the fees arising from some important practical branches which, though indispensible to the student, could not be made self-supporting. But though great has been the loss to the Faculty and the University in the death of Dr. Howard, we must not waste valuable time in useless repining, but must rather close up our ranks and press on shoulder to shoulder to carry on the work on the lines and in the direction so energetically followed by our late Dean, and in our work we must look to the friends of the University of every degree for that help and material assistance without which our efforts will be of little avail. We will look to our graduates to supply the talent and the scientific knowledge required to fill the gaps which must from time to time occur in our ranks; we must look to our statesmen and men of influence to protect us against unjust legislation calculated to cramp our efforts and to cripple our usefulness; we must look also to our wealthy men and wealthy women to furnish us with means to keep abreast with the scientific progress of the day; and lastly, and above all, we ask for your hearty goodwill and active sympathy, for upon them must largely depend the success of our efforts. Relying, then, upon your active help, and with an earnest and sincere determination to use the means at our disposal to the best advantage in the interests of the Faculty and the University, may we not hope to carry forward and maintain the Faculty in the very front rank among the medical schools of this continent, and in so doing shall we not also be building up to the memory of Dr. Howard a most fitting and enduring monument.

The graduating class to the number of thirty-seven, robed in academic costume, then advanced to the dais, where Dr. Stewart

administered the customary oath and Sir William Dawson conferred the degree of Doctor of Medicine and Master of Surgery on each.

Dr. Geo. McDonald then read the valedictory on behalf of the students.

Dr. Wesley Mills then read the reply on bebalf of the Faculty. (See JOURNAL for April.)

Sir William Dawson, in bringing the proceedings to a close, said that they of the Faculty of Arts sympathized deeply with their sister Faculty in its deep loss, and they all joined most cordially in expressing the deep regard and the high estimation in which the late Dean was held. Those who were privileged to enjoy his friendship could testify to his efforts in the public interest to elevate the medical profession, and they know what style of man he was. He could say nothing stronger to the graduating class than that they should emulate their Dean as a man, a physician, and a Christian, and by that means they would attain to professional greatness and even to a nobler good. The graduates should remember that they were all working in the same direction with the same difficulties and drawbacks. They should give their aid in extending the borders of the University. They must do more than keep pace with public opinion, they must keep in advance and mould it in the best ways.

The total number of students enregistered in Medical Faculty during the past session was 233, of whom there were: From Ontario, 106; Quebec, 57; New Brunswick, 19; Nova Scotia, 23; United States, 10; P. E. Island, 10; Newfoundland, 2; Manitoba, 4; British Columbia, 1; West Indies, 1.

The following gentlemen have passed their Primary Examination, which comprise the following subjects: Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Physiology, Histology and Botany:—

Alexander, W. W.	Calkin, B. H.	Greene, T. J.
Ault, C. A.	Clemesha, J. C.	Hamilton, W. F.
Beers, A. H.	Dewar, Alex.	Harris, N. M.
Bennie, R.	Farwell, W. A.	Harrison, J. D.
Booth, J. S.	Fletcher, R. W.	Hattie, W. H.
Bowie, R. A.	Gibson, R. J.	Hayes, John
Brown, W. A.	Gorrell, A. S.	Hubert, P. T.
Busby, J.	Grafton, E. A.	Internoscia, Antonio

Jenkins, W. E.	Mulligan, E. A.	Smith, C. F.
Keir, E. J.	McCrimmon, A. A.	Sparling, A. J.
Kelly, C. I.	McMillan, J. H.	Speir, J. R.
Kemp, H. D.	McGuire, J. C.	Troy, W.
Lambert, E. M.	O'Connor, C.	Tunstall, A.
Love, A.	Oliver, A. J.	Webstor, R. E.
Lovering, W. T.	Parke, G. H.	Williamson, H. M.
Mader, A. I.	Patton, H. M.	Williamson, W. P.
McMartin, M.	Robertson, E. A.	Woodruff, E. H.
Morrow, W. S.	Robertson, T. F.	

The following gentlemen, 38 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from the University. In addition to the Primary subjects mentioned, they have passed a satisfactory examination, both written and oral, on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Infancy, Gynæcology, Pharmacology and Therapeutics, Medical Jurisprudence, Pathology and Hygiene, and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital:—

Aylen, W. W. .....Aylmer, Q.	Mowat, M. M...Williamstown, O.
Booth, J. S.....Montreal, Q.	Muirhead, D. A., Carleton Place, O.
Brown, G. A., Charlottetown, P.E.I.	Murray, D. A., Bl'k Meadows, N.S.
Campbell, G. G., B.Sc..Truro, N.S.	McCurdy, T.....Ormstown, Q.
Creasor, J. A., B.A., Owen Sound, O.	McDonald, A.....Iroquois, O.
Delaney, W. J.....Peterboro', O.	McDonald, H. N.....Laggan, O.
England, W. S-.....Dunham, O.	McDonald, G.....Renfrew, O.
Esson, F. G.....Halifax, N.S.	McDonald, P. A...Alexandria, O.
Garrow, A. E.... ....Ottawa, O.	McEwen, H....Carleton Place, O.
Gemmill, E. W..... Almonte, O.	McIntosh, D. H., Carleton Place, O.
Holmes, A. D.....Chatham, O.	McKercher, H. .....Stittsville, O.
Hopkins, F. A.....Cookshire, Q.	McKinnon, T. S....Lockport, N.S.
Hubert, P. T., Harbor Breton, Nfld.	McLellan, A. A., Sum'erside, P.E.I.
Irwin, W. T.....Pembroke, O.	Philp, W. S.... .....Montreal, Q.
Kerr, N.....Holyrood, O.	Shanks, A. L.....Huntingdon, Q.
Low, D.....Palmerston, O.	Vipond, A. E.....Montreal, Q.
Martin, J. M., Brown's Creek, P.E.I.	Wheeler, C. L., B.A., Montreal, Q.
Mathieson, C. S., Harrington, P.E.I.	Whyte, J. J.....Lancaster, O.
Morehouse, O. E.....Gibson, N.B.	Wylde, C. F... .....Halifax, N.S.

Medals, Prizes and Honors.

The Holmes Gold Medal, for the best examination in all the branches comprised in the medical curriculum is awarded to Alexander E. Garrow, of Ottawa, Ont.

The prize for the best examination in the final branches is awarded to Hugh McKercher, of Stittsville, Ont.

The prize for the best examination in the primary branches is awarded to William Arthur Brown, of Chesterville, Ont.

The Sutherland Gold Medal is awarded to John C. Clemesha, of Port Hope, Ont.

The following gentlemen, arranged in order of merit, deserve honorable mention:—

In the Primary Branches—Hamilton, Morrow, Busby, Bowie, Clemesha, Spier, Farwell, Grafton, Kelly, Dewar, Robertson, T. F. Troy, W. P. Williamson, McMillan and Alexander.

In the Final Branches—Campbell, McCurdy, Murray, Philp, England and Creasor.

PROFESSORS' PRIZES.

Botany—W. B. Hallam Massiah, of Barbadoes, West Indies.

Anatomy—Second year, W. A. Brown. Honorable Mention, T. F. Robertson. First year, James Henderson, of Warkworth, Ont.

CANADIAN MEDICAL ASSOCIATION.

We beg to direct our readers' attention to the following circular issued by the Executive of the Canadian Medical Association. We hope to see a large number of practitioners avail themselves of this favorable opportunity of visiting our great North-West:—

MONTREAL, April 22nd, 1889.

DEAR DOCTOR:

The twenty-second annual meeting of the Canadian Medical Association will be held at Banff, N.W.T., on the 12th, 13th and 14th of August next.

The Canadian Pacific Railway Company has agreed to carry members and delegates with their wives or members of their families at the following rates: From points in Ontario or Quebec, to Banff and return, at $95 each, including a double berth in sleeping car for each person, and meals in the dining cars on the way West from Montreal or Toronto and back, and four days living at the Banff Hotel.

The passage tickets will be made good from and to any points on the Canadian Pacific Railway, in either Ontario or Quebec, to Montreal or Toronto, but berths and meals will begin at these two places only.

From other points in the Dominion the rates will be as follows: From Halifax to Banff and return, $110; from St. John, N.B., to Banff and return, $100, but the tickets from these points will

not include sleeping car accommodations nor meals East of Montreal in either direction.

From Port Arthur to Banff and return the rate will be $60; from Winnipeg or Brandon, $50; from Regina, $35, including meals and berths from all these points.

From Calgary the rate will be $4.50, without meals or berths.

From Victoria or Vancouver to Banff and return, including meals in dining car and double berth in both directions, $30, exclusive of hotel accommodation at Banff; or $40 including four days hotel accommodation at Banff.

Owing to the provisions of the Interstate Commerce Law, it will be impossible to get reduced rates from points in the United States, with the exception of St. Paul, Minn., from which the following rate is offered: $60 to Banff and return, including meals and sleeping car accommodation between Winnipeg and Banff only. Delegates from the United States are therefore requested to make their own arrangements between their homes and Montreal, Toronto, St. Thomas, or other points on the Canadian Pacific Railway.

An effort is also being made to secure special rates from Liverpool to Montreal by the Canadian steamship lines for trans-Atlantic delegates.

It is intended that the party shall leave Montreal on the evening of the 6th of August by the regular Pacific Express, and arrive in Winnipeg on the 9th, and stop over one day there, leaving Winnipeg on the 10th of August, they will arrive at Banff early on the morning of Monday, August 12th. The meetings of the Association will then be held in the Hotel (*accommodation being provided by the Canadian Pacific Railway Company*) on the 12th, 13th and 14th, after which the members of the party can either return at their convenience or take a trip to the Coast, leaving early the following morning (August 16th), for which special terms have been arranged as follows: From Banff to Victoria and return, not including meals or berths, $20; or $30 including meals in the dining car and berths. The tickets for this excursion will be on sale at Banff to members and delegates and their families only.

The special tickets issued by the Canadian Pacific Railway to Banff and return will be good for sixty days, and the holders will be allowed stop-over privileges on the Canadian Pacific Line in either direction at pleasure. They will also be exchangeable at Port Arthur and Owen Sound, so as to enable members to travel in either direction by steamer between these points. Meal and berth coupons will be issued in connection with these tickets

and will be available as part payment of expense of any who wish to make additional stops and spend longer time on the line. It is considered desirable, however, by the Excutive Officers of the Association that, as far as possible, the party should travel together by the all-rail route as far as Banff, so that all may be present at the opening of the meeting.

In addition to the members of the Canadian Medical Association to whom this circular is specially addressed, a cordial invitation is hereby extended to all members of the regular profession in good standing in the Dominion of Canada, the United States and Great Britain, to whom the necessary certificates will be sent on application to the Secretary.

Members and delegates are requested to notify the Secretary of the points on the Canadian Pacific Railway from which they intend to start at a sufficiently early date to enable the Railway Company to forward special tickets to the aforesaid points.

It will also be necessary to present a certificate from the General or Provincial Secretary to enable members or delegates to secure the above-mentioned special tickets.

Members who intend to present papers at this meeting are requested to inform the Secretary at as early a date as possible of the subjects which they propose to bring forward.

JAMES BELL, M.D., *General Secretary*,
GEO. ROSS, M.D., *President*. 53 UNION AVENUE.

Obituary.

ROBERT PALMER HOWARD.

Robert Palmer Howard was born in the city of Montreal on the 12th January, 1823. His parents were both natives of Ireland, and had come to this country some years previously. After leaving school, young Howard engaged in business with his father, who had become a well-known merchant; but mercantile pursuits were always uncongenial to him, and he availed himself of the earliest possible opportunity to enter upon the study of medicine, having conceived the strongest admiration for that profession and determined to become a member of it. He enrolled himself as a student at McGill University, and, after a brilliant career, graduated in 1848. After a year's visit to the great hospitals of London and Paris, he began the practice of medicine in Montreal in 1849, and continued in active work

in the same place up to the time of his death. His marked professional ability, combined with a courteous and sympathizing manner, won for him at once a large *clientèle*, and he was soon looked upon as a rising man. He was appointed attending physician to the Montreal General Hospital and (1856) was made Professor of Clinical Medicine in McGill University, and, on the death of Dr. Holmes in 1860, he succeeded to the chair of Theory and Practice of Medicine. His extensive acquirements, his keen and careful investigation of all his cases, together with a rare capacity for imparting knowledge, soon made him known as a successful teacher of men. As years went on, he rose steadily in the profession until, after having been the recipient of many honors, he stood at the very top and was its acknowledged leader. His reputation, which had about it nothing meretricious, but was founded upon hard and continued labor in the professional field, led to his holding the largest and most lucrative practice in this city, and to his advice being eagerly sought from far and near. In 1882 Dr. Howard became Dean of the Medical Faculty upon the death of Dr. G. W. Campbell, and in 1886 the University conferred upon him the degree of LL.D. *honoris causâ*, a well-deserved compliment for long and successful work in teaching and for many important contributions to medical literature. Dr. Howard held at various times nearly all the important public positions of trust which are in the gift of the profession. He was twice President of the Medico-Chirurgical Society of Montreal, President of the Canadian Medical Association, and President of the College of Physicians and Surgeons of the Province of Quebec; he was also Vice-President of the Association of American Physicians.

The name of Dr. Howard will always rank amongst the great names of this country. His life was pre-eminently a model one from every point of view. Earnestness in everything he undertook to do was the keystone of his character. His patients were his constant care, and they soon learned to appreciate the unceasing watchfulness and untiring application with which he guided them safely through an illness. For his college and his students he had a deep affection, which was on their part most cordially reciprocated. A skilled educationist, he took the

deepest interest in all matters touching medical education, and took an active part in all the legislation governing this subject. He for several years labored earnestly, but in vain, to bring about a General Medical Council for the Dominion of Canada. To borrow the words of a recent writer, "Important and enduring has been Dr. Howard's influence upon the groups of students who have had the benefit of his instruction, as well as upon the men who have been fortunate enough to be his colleagues. Unselfish to a fault, keenly zealous for the welfare of the profession, enthusiastic as a youth, he has—perhaps unconsciously to himself—impressed all with whom he came in contact with the earnestness of life, the nobility of work, and the dignity of his calling." His works *do* follow him.

Of the many letters of condolence received by the Medical Faculty of McGill University on the death of Dr. R. P. Howard, none will be cherished more fondly than that forwarded by the graduates of McGill resident in Toronto. On the receipt of the news of Dr. Howard's death the following organized a meeting: Dr. Jos. Workman, Dr. J. A. Temple, Dr. H. C. Burritt, Dr. C. H. Cook, Dr. B. E. McKenzie, Dr. L. L. Palmer, Dr. H. Hunt, Dr. R. A. Stevenson, Dr. B. L. Riordan, Dr. Charles O'Reilly, Dr. D. Moffatt, and Dr. D. J. Gibb-Wishart. Surg.-Major Keefer, who was in Toronto at the time, and Dr. Johnston of Milton were also present. The chair was taken by Dr. Jos. Workman, the oldest living graduate of McGill University. After each of those present had testified to their respect and admiration for the late Dr. Howard, and their grief at his death, it was resolved to transmit to the Faculty the letter here appended:—

TORONTO, April 8th, 1889.

TO THE MEDICAL FACULTY, McGILL UNIVERSITY,
MONTREAL.

Gentlemen:

The recent loss our Alma Mater has sustained by the death of Dr. R. Palmer Howard, Dean, and Professor of the Practice of Medicine, prompts us all with a unanimous feeling of regret, and profound respect for his memory, to convey to you our sympathies and appreciation of the great loss you have met with in the death of so able and accomplished a teacher. His unvarying, genial, and gentlemanly manner endeared him to each one of us, and we shall ever remember

with gratefulness his many personal kindnesses to us individually while we were students. To the last he was the same arduous, devoted student, working for the interests and welfare of our profession.

In his death we feel you have lost a teacher whose place it will be difficult to fill; the public, an accomplished physician; the student, a warm, devoted friend and a bright example; and the profession, an ornament.

In conclusion, we beg to say that we feel this to be but a small tribute to the memory of one so highly and deservedly respected.

Signed on behalf of the Graduates in Medicine of McGill University resident in Toronto.

JOSEPH WORKMAN, M.D.
D. J. GIBB-WISHART, M.D.

DEATH OF DR. C. J. B. WILLIAMS.

On the 28th of March there died at his villa at Cannes this well known veteran in medicine, who for very many years held a foremost place amongst British physicians. Dr. Williams' name has for the last fifty years or more been connected with the clinical study and pathology of thoracic diseases. Born in 1805, the son of a Wiltshire clergyman, he took his degree in medicine at Edinburgh in 1824, and subsequently studied at Paris, where he became the pupil of Laennec and Andral. His recollections of the Paris School of Medicine are to be found in the very interesting volume Dr. Williams recently published, "Memories of Life and Work," and the reader will be able to form an idea of the state of medical practice in the pre-stethoscope days.

Dr. Williams brought to England the practice of auscultation and percussion, and soon his industry, energy and good clinical judgment brought him a large consulting practice. He became F.R.S. in 1835, F.R.C.P. in 1840, and later on Censor, Gulstonian and Lumleian lecturer. In 1839 he was appointed Professor of the Principles and Practice of Medicine at University College and first physician to University College Hospital. Dr. Williams was the founder of the Hospital for Consumption and Diseases of the Chest at Brompton, an institution which has had a most successful career. The introduction of cod-liver oil into practice was largely due to the recommendations of Dr. Williams. As life advanced a full share of professional honors

fell to his lot. He was the first President of the Pathological Society, and at a subsequent date President of the Royal Medico-Chirurgical Society, and in 1874 was appointed Physician Extraordinary to the Queen. Retirement from practice took place in 1875, when he took up his residence at his villa at Cannes, visiting England only in the summer. Death was the result of congestion of the lungs. Dr. Williams was author of the well-known standard text-book "Principles of Medicine," as well as of "Diseases of the Chest" and (jointly with his son) of "Pulmonary Consumption," and contributed numerous papers of great scientific value to the medical journals of the last half century.

Medical Items.

Your Duty to Your Neighbor.—The case of Horne *versus* Jessop recently tried before Mr. Justice Denman in England is interesting from a medico-legal point of view. Mrs. Horne, a laundress at Huddersfield, sent her little boy to collect an account from her customer, Mr. Jessop, having no reason to know that Mr. Jessop's daughter, then in the house, had been stricken down with scarlet fever. That was on the 8th of June, and on the 11th little Horne was found to be sickening. On the 11th his little sister was, under like circumstances, sent to Mr. Jessop's abode to fetch a bundle of linen for the wash, and two days after this child showed the initial symptoms of the same disease. Altogether four children were affected. The medical evidence went to show that from the fourth to the seventh day is the common period of infection, though it was admitted that it could take place within two days, and it was urged by the defence that scarlet fever was in the neighborhood, and that infection may have arisen from other sources. Further, it was contended that the linen carried by the children had not been exposed to the infection of the disease. The suit ended in a verdict, by consent, for the defendant, who was understood to have made a satisfactory arrangement with the Horne family. As Mr. Justice Denman hinted, there was much doubt and uncertainty in the case, but the lesson to be learnt is plain enough, viz., that when infectious disease occurs soiled linen must be washed at home.

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Original Communications.

ON THE ALTERATIONS OF THE MYOCARDIUM FOLLOWING SECTION OF THE EXTRA-CARDIAC NERVES. By G. FANTONI.

Translated from "Il Pisani," by DR. JOSEPH WORKMAN.

Eichhorst and Zander, having studied, in pigeons, the alterations produced in the myocardium by bilateral section of the vagus, found a fatty degeneration of the heart, which was attributed by the former to the absence of the influence of the vagus on the cardiac muscle, and by the latter to inanition. Zander sought for the reasons of his hypothesis in the fact that the animals constantly and progressively lost weight from the day of operation until death.

The writer having, through the introduction and with the support of Dr. Lustig, undertaken the study of this subject in the laboratory of the Hospital of Humbert I., with the view of reaching a more secure result and a more just interpretation of the facts, endeavored to avoid anticipatively a series of complications which might have a damaging influence over the ulterior course of the process—*e.g.*, advanced age, pregnancy, the re-uniting of the stumps of the cut nerve, suppuration of the wound, pulmonitis, fever from whatever cause arising, and decrease of weight of the animal.

By selecting young animals, sound and non-pregnant, and excluding from report those in which suppuration of the wound, or fever, had chanced to occur, the chief indications were satis-

fied. As to pulmonitis, however, Fantoni says that, having twelve times made the bilateral section of the vagus on rabbits and guinea-pigs, in some with tracheotomy and in others without it, this affection always supervened, unless the animals died sooner from other pulmonary disorders. He therefore left these out of account in his conclusions.

By executing, instead, the *unilateral section* of the vagus, pulmonary complications never arose; and not only did they not decrease in weight, but they usually weighed heavier, so that when killed they were in perfect health, and in this state they came under examination.

Under these circumstances it may be held that if alterations be met with, they are the direct results of the defective activity of the vagus. Having thus premised and detailed the methods of microscopic research followed, Fantoni summarizes the results of his experiments as follows:—

In forty-eight hours after section of one of the vagi, there were observed, macroscopically, yellowish-white patches of various size, isolated, and distributed especially on the two faces of the interventicular septum, the gross papillary muscles, and the external surface of the heart, along the sulci of the coronary arteries.

Under microscopic examination, in the fresh state of these parts, there were seen, in longitudinal section, many fibres with striature almost vanished, swollen, with irregular contours, and full of numerous albuminoid granules (reaction with acetic acid). On transverse section (hardened in absolute alcohol and subsequently colored), many fibres were observed devoid of nuclei, others with rich nuclei of chromatin, wrinkled, forming irregular figures, tufted, triangular, octangular, stellate, etc., etc. Around the nucleus thus modified there is always a whitish areola with regular contours and a surface greater than the rest of the fibre.

In the interfascicular spaces there are observed numerous foci of infiltration with small round cells, which gradually invade the interfibrillar spaces. These foci become rapidly diffused in following days; the round cells become fusiform, and they form, in the cardiac muscle, a true netting, whose meshes separate the

muscular fibres from one another. From the eighth to the tenth day many of these fibres present a notable degree of atrophy (in some, simple atrophy; in others, degenerative atrophy); the fibres devoid of nuclei are much more numerous than in previous days, and the special alterations above described, though met with, are more scarce.

In the more advanced epochs (eighteenth to thirtieth day), many fibres have disappeared and are substituted by fascicles of connective tissue, rich in young connective cells. Correspondent to this, the cardiac muscle in the more altered tracts appears consistent (?) and of a whitish color.

The general conclusion which may be drawn from the above mentioned alterations is, that the fibres of the vagus not only have a functional value, but also that they exercise over the heart a trophic influence. The author having afterwards made the same experiments on the sympathetic and the depressor, found that the bilateral section of the sympathetic does not give alterations in the heart, whilst section of the depressor gave the alterations, which have been described for section of the pneumogastric, but less pronounced.

[Perhaps the most important results of the physiological investigation of the heart during the last half dozen years may be summarized as follows:—

1. Clearer and more extensive knowledge of the innervation of the heart.
2. Truer conceptions of the causation of the heart-beat.
3. Broader views of cardiac rhythm.
4. New light on the relation of the cardiac nerves to the nutrition of the organ.

While the investigations of Eichhorst and Zander had led us to more than suspect the truth in regard to the importance of the nerves to the nutrition of the heart, it was desirable that the whole subject should be put in a position in which extraneous factors might be without hesitation excluded. While I believe that, as the result of my own investigations on cardiac physiology, I have been the gainer in all the directions indicated above, and while I think these results flow from the

investigations taken as a whole, which have been carried on in different quarters of late years, there are others which, so far at all events as my own insight goes, are more important, and they have at all events been more helpful to me. I refer to the wider conclusion, that not only the cardiac nerves, but all nerves (*i.e.*, all centres), are in some sense trophic; and that this follows from the view that function and nutrition are but different phases of the one thing—the general metabolism of the body. The results for the heart are quite in harmony with those arising from the section of the nerves supplying other tissues and organs; so that these investigations in cardiac physiology have been stepping-stones by which we have been enabled to reach a generalization which, as it seems to me, is destined to work profound changes in our views of both physiology and pathology. It appears now to be a radical error to separate "function" and "nutrition" except as a matter of convenience; and I much question if it would not be better to alter our nomenclature in the near future to bring it into harmony with the new conception. It would not only result in a broader view of vital processes, but would greatly simplify our classifications of physiological and pathological processes. It would be well if the work on the sympathetic and depressor nerves could be repeated. It is hazardous at present to attempt to interpret it. Hitherto the depressor has been regarded chiefly as an afferent nerve for impressions from the heart to the vaso-motor centre. Sewall thought it also had a similar relation to the cardio-inhibitory centre, a view which he supports by experimental evidence. If the depressor should be shown to contain no efferent fibres, then the conclusion that "nutrition" depends on afferent as well as efferent impulses would appear legitimate. This I fully believe follows as a result of a host of facts, though additional evidence of the kind this paper of Fantoni's furnishes would be very welcome. I beg to call attention to the rapidity (forty-eight hours) with which these changes were, I will not say initiated, but actually accomplished so as to be visible to the naked eye. If we believe in a constant neuro-metabolic influence this is intelligible and this alone. The changes so pronounced in nucleus and around it also is additional evidence of the importance of that body on the whole cell-life, a truth that the most modern

researches are making abundantly evident. It is most interesting to find the microscope confirming the results of purely physiological experiment.

It remains for me to explain how this paper of Fantoni's appears in an English dress. Having sent a few little reprints of my own to Dr. Workman (knowing that he was a perennial freshman of the right sort), I received in return this paper, translated, and enclosed between some sheets full not only of appreciative thoughts and valuable suggestions, but abounding in that combined wit and wisdom for which the Nestor of our profession is so noted. At once perceiving that I had become possessed of a gem of the highest value, I resolved that no time should be lost in exhibiting it to the medical public. The paper seems to me to be of the highest scientific value at the present time. It supplies another needed link in the physiological chain which is to bind together a host of isolated facts. Personally, I feel grateful to Dr. Workman. He has placed the whole profession under obligations by bringing such a paper to light.—*Wesley Mills.*]

INTUBATION *VERSUS* TRACHEOTOMY FOR THE RELIEF OF LARYNGEAL STENOSIS.

By George E. Armstrong, M.D.

(Read before the Medico-Chirurgical Society of Montreal.)

Mr. President and Gentlemen :—I do not appear before you this evening as the reader of the paper because I have anything new or original to offer on the subject I have chosen, but because I have a notion that a member of this Society can sometimes do a good thing in gathering together the thoughts of representative men on a subject of general interest to the profession, and present them embodied in a paper for discussion. We probably do not all read the same meaning in journal articles, and we do not all have the same result from any given item of treatment, medical or surgical, and I think that an expression of views on the popular subject of intubation, even if at the expense of the reader of the paper, will result in bringing us all nearer to the truth.

The insertion of a tube through the mouth into the larynx for

the relief of laryngeal stenosis is a new operation. Dr. O'Dwyer began his experiments in this line in 1880, but the results were only given to the profession in a paper which appeared in the *New York Medical Journal* in August 1885. The idea, however, had occurred to others as early as the beginning of the present century. Desault catheterized the trachea in 1801, and Bouchat of Paris, in 1858, first inserted a tube into the larynx for obstruction there, and proposed intubation as a means of relief from impending death from suffocation in membranous croup and in laryngeal diphtheria as a substitute for the old classical operation of tracheotomy. His proposal was critically examined and adversely reported upon by a committee composed of his *confrères*, of whom the great Trousseau was one. Bouchat's tube was short and round. The idea seems to have dropped at that time, and nothing more was heard of it until Dr. O'Dwyer appeared as its champion a few years ago.

Before speaking of the practical application of the tubes, I wish to remind the members that although the mucous membrane of the larynx and trachea is continuous with that of the pharynx, the epithelium changes. In the pharynx, the upper half of the epiglottis, and posterior wall of larynx, as low down as the vocal cords, squamous epithelium is found, and the diphtheritic membrane is infiltrated into the mucous membrane, at least in a percentage of the cases. But in the larynx and trachea the epithelium is of the columnar variety, and the pseudo-membrane does not infiltrate it, but simply lies upon it. This fact might be of importance in discussing the vexed question of the unity or plurality of membranous croup and diphtheritic laryngitis.

In operations on the mouth and in the naso-pharyngeal space I have no experience, but Thomas Annandale of Edinburgh, in a case of operation on the thyroid body, when death was threatened by suffocation, introduced a No. 10 gum catheter and thereby saved his patient. He used the catheter because it was simpler, safer and quicker than tracheotomy, and equally efficient. Dr. Macewen first catheterized the larynx July 5th and 6th, 1878, and he reports several cases of œdema glottidis treated successfully in this way. In operations in the mouth, a catheter

can be introduced in the larynx, packing can be introduced around it, and the catheter continued to some distance away from the field of operation by means of rubber tubing and the anæsthetic administered through it. It has been proposed to introduce the catheter through one nostril, but this is more difficult, and, as a rule, is no more effective.

In chronic inflammatory conditions, and in accidental or surgical wounds, intubation is said to answer better than tracheotomy. Dr. O'Dwyer reports one case where the tube was worn ten months.

One of the many objections to intubation may be appropriately considered in this connection, and that is, the size of the lumen of the tube. Does it admit freely sufficient air to ærate the blood? This question has been well investigated by Lennox Brown of London. He found that the diameter of the glottis at birth was one-eighth of an inch, and at 14 years of age half an inch; the diameter of the trachea at the third ring at birth is three-sixteenths of an inch, and at 14 years of age three-eighths of an inch; the diameter of the lumen of the trachea at 1 year of age is barely one-quarter of an inch, but an adult, at rest, can breathe comfortably through an opening of this size. Dr. O'Dwyer reports the case of a man wearing a canula in the trachea for seven months, and the diameter of the inner tube is exactly a quarter of an inch. The narrowest part of the trachea is immediately below the vocal cords, where, by reason of the rigid cricoid cartilage, it is also the least dilatable.

But it is in croup or laryngeal diphtheria that, as general practitioners, we are most interested in the use of O'Dwyer's tubes. I have used the tubes in ten cases. A description of one of these is practically a description of all of them. All the cases were in children. In all but one there had been pseudo-membrane seen in some part of the pharynx before, after, or at the time of operation. In one case no membrane was seen at any time in the pharynx. The symptoms in each of these ten cases were those of acute suffocative laryngeal stenosis. There was present restlessness, the typical inspiratory and respiratory stridor, marked depression of the epigastrium, and supra sternal

notch and dilation of nostrils during inspiration, and evidence of deficient æration of the blood in the livid countenance and blue lips. In all cases the pulse was rapid and feeble, with more or less elevation of temperature. From my experience in these cases, I firmly believe that all of them would, if they had not been quickly relieved, soon have ceased to breathe. The insertion of the O'Dwyer tube gave as great and as rapid relief to the patient as the insertion of a tube into the trachea. There was less coughing and irritation immediately afterwards than occurs after tracheotomy. The respiration became at once easy and free. The patient passed suddenly from a condition of great restlessness and distress to one of comparative quiet and ease. I have in only one case pushed down membrane ahead of the tube. In this case, on removing the tube and re-inserting it the passage was clear. In one case only did the tube subsequently require to be removed on account of its lumen becoming filled up with the pseudo-membrane. Four or 40 per cent. of these cases recovered. In two of the successful cases the tube was coughed up on the third day, and in two I removed it on the fourth and fifth days. The advantages claimed for intubation over tracheotomy are—

1. No anæsthetic is required.

2. It has less of the horrors of an operation about it. Parents will generally yield a ready assent to the proposal to intubate, while it is with great difficulty that their consent to tracheotomy can be obtained, especially when such small hope of recovery afterwards can be held out.

3. The subsequent attendance is less irksome. All my cases have been in the houses of the poor. The only nurse obtainable has been the mother, who has been obliged to be nurse and at the same time give more or less care to other children and to her house, aided generally only by the kindness of some fearless and sympathetic neighbor. These people often cannot afford a trained nurse, and but few of these mothers possess sufficient intelligence and nerve to perform the difficult task of caring properly for a tracheotomy tube.

4. The mucus does not dry in the tube and diminish its calibre

as it does in a tracheotomy tube. The air enters by the nose, is then warmed and filtered as so intended by nature, and there is less risk of secondary bronchitis and pneumonia.

5. The tube need be left in place only four or five days as a rule, and when it is removed there is no gaping wound to heal.

6. Another important advantage is that the general practitioner can intubate without skilled assistants, and this is no small matter. It is not always easy, even in Montreal, to get a *confrère* at short notice. There are hours in the day when nearly every physician is out, or the critical time comes in the middle of the night when one feels reluctant to call a brother practitioner out of his bed. These difficulties in the country must be far greater.

7. It does not in any way interfere with the subsequent performance of tracheotomy under more favorable conditions, and at a more convenient time if thought advisable.

8. Lastly, and most important of all I believe, the percentage of recoveries is greater after intubation than after tracheotomy. I think I am quite safe in saying that I have performed tracheotomy twenty times for cases occurring in my own practice and in that of my *confrères;* of these only four have recovered. I have intubated ten times, one case in my own practice and nine in the practice of my *confrères*, and of these four have recovered. In other words, 20 per cent. recovered after tracheotomy and 40 per cent. recovered after intubation.

I have reason to believe, however, that this high percentage of recoveries will not continue. Dr. F. E. Waxham has collected 1072 cases of intubation performed in various parts of the United States, with 287 recoveries or 26.77 per cent.; and in his book on "Intubation of the Larynx," the ages of 661 cases are given, with percentage of recoveries at each year of age. The ages run from 1 to 14 years, and the average percentage of recovery is 27.38 per cent. The highest percentage of recovery is at the ages of 9 and 10, of whom 50 per cent. recovered.

Jacobi states, in Meigs' and Pepper's Treatise on Diseases of Children, "that out of 1024 operations of tracheotomy performed in various parts of the world, but principally in Europe, 220 or 21.48 per cent. recovered."

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Dr. Max. J. Stern of Philadelphia, at the recent meeting of the International Medical Congress, gave statistics taken from Bourdillat showing recoveries after tracheotomy amounting to 26.40 per cent.

Comparing Dr. Stern's statistics at different ages with Dr. Waxham's statistics for the same ages, we find the following taken from Waxham's book :

Tracheotomy.	p.c.	*Intubation.*	p.c.
Under 2 years of age.....	3	Under 2 years of age....	15.62
2 to 2½ " "	12	2 to 3 " "	19.46
2½ to 3½ " "	17	3 to 4 " "	30.00
3½ to 4½ " "	30	4 to 5 " "	32.65
4½ to 5½ " "	35	5 to 6 " "	33.92
Over 5½ " "	39½	Over 6 " "	43.33

Showing that in young children under 4 years of age intubation yields a far larger percentage of recoveries than does tracheotomy.

OBJECTIONS.

1. The tube may push a piece of membrane down ahead of the tube, thereby blocking its lower end and obstructing the ingress or egress of air. This objection applies with equal force in the introduction of the tracheotomy tube, and the objection is only valid in so far as the difficulty of removing and reintroducing the one is greater in the one than in the other; and this is not much. It may be easily withdrawn by the string which is still attached at this time, and its reintroduction scarcely more difficult in the intubation tube than in the tracheotomy tube. It occurred in only one of my cases, and caused no serious harm.

2. The tube may be obstructed by membrane passing into it. This difficulty I encountered once. On the other hand, in the *great majority* of cases it remains clear, requires no attention, and causes no irritation; while the tracheotomy tube is constantly becoming choked by blood and mucus drying in the tube, necessitating the frequent removal and cleansing of the inner tube.

3. Food may pass down the tube during the act of deglutition and set up pulmonary complications. This, it seems to me, is the great objection to intubation. In the last eight of my cases I requested the attending physician to insist upon the child being

fed for the first three days entirely upon peptonized enemata, allowing the child only pieces of ice by the mouth. I think this precaution has contributed largely to the success of the operation. Dr. Waxham has suggested the addition of a false rubber epiglottis to the O'Dwyer tube, and then that the child be fed in the prone position, lying well forward when swallowing. Dr. J. Mount Bleyer recommends a tube more cup-shaped at its upper end, having also a false rubber epiglottis.

The difficulty of swallowing is caused less by the large head interfering with the closure of the epiglottis than by its impeding the action of the ary-epiglottic folds and general constriction of the laryngeal vestibule. That the lid action is not necessary in the act of swallowing in adults is proved by the experiments of Majendie and by the clinical history of patients whose epiglottis has been destroyed by syphilitic disease. Giving semi-fluid food is less liable to result in unpleasant symptoms than is liquid food.

4. The tube may slip down into the trachea. This should not, and hardly can, occur if a tube large enough is inserted. The large head is a protection against this accident. The tube may be coughed up, but in my experience, if the tube is properly weighted, it will not be coughed up until recovery is so far advanced that its re-introduction will not be needed.

5. If it becomes displaced the nurse cannot reintroduce it. This is true. But if the physician waits until the first coughing and expelling of mucus is over, the danger of displacement must be slight. I have not seen it occur.

So far as I have experience in the use of O'Dwyer tubes, I am pleased with them; and if the percentage of recovery is found, after a longer trial, to equal tracheotomy, I think it preferable to tracheotomy in private practice for the reasons given, and I am certain that general practitioners will find permission given them in a much larger number of cases to give the last chance of relief by surgical means to a pretty large group of patients suffering from a very fatal and distressing disease.

CLINICAL RECORDS.

By R. L. MacDonnell, M.D.,
Professor of Clinical Medicine, McGill University.

Of late years much has been written concerning the value and importance of personal and family medical records, and, at present, great attention is being given to the subject. The custom of putting the histories of cases on record dates from the earliest times, since the days when the sufferers who obtained relief from their diseases at the temple of Æsculapius used to leave behind them a statement of their symptoms and the treatment adopted for their cure. Since these early times, case reporting has been a common custom in the profession, and the form and manner thereof has undergone but little change. The practitioner of to-day reports his case in much the same fashion as did Hippocrates or Galen, adopting a similar style and phraseology. Scientific men of all nations and in all ages have never failed to realize the great importance of clinical records. By their aid they were enabled to compare their own cases together, the one with the other, to compare the modes and results of practice at various periods of their own lives, to compare their procedure with that of former generations, and, lastly, to leave their writings to posterity to form at once a guide to their successors and to enable us, in our day, to judge how much or how little we have improved upon the diagnosis and treatment of our ancestors in the profession. Given certain symptoms, the student of the 19th century can see how Sydenham, Morgagni, Galen or Hippocrates would have regarded such a case, and the treatment they would have adopted.

The new movement has for its object the improvement and extension of this system of record-keeping. The writing was formerly done for the benefit of the practitioner and his brethren, but now it is proposed that the patient should be educated up to seeing that he is the person directly benefited by a history of the symptoms present during his life, the circumstances attending his birth, the medical history of his ancestors and his near and remote relations, and, lastly, that the story of his life and

death, if properly told, will be of inestimable service to his children.

We do not suppose that the public will ever be brought to such a state of intelligence as to encourage a system of record-keeping that would be so serviceable to them, though we like to indulge in ideas of the great utility and importance of such a system. Imagine a family case-book with the history of two or three generations; the family adviser would merely have to make from time to time a short entry of each of the illnesses for which he had attended any member of the family. A light would be thrown upon the origin of obscure diseases and many a doubtful diagnosis would be made clear. Examples suggest themselves in numbers. A youth presents symptoms and signs of heart disease or of chorea, and the previous history of an attack of acute rheumatism is obscure. Were this model life history at hand the practitioner could get at once an accurate report of what had really occurred, not in the unreliable story of the patient's mother, but in the notes of his predecessor in medical charge of the family. And, moreover, supposing that this direct evidence were lacking, a further search might reveal evidence of rheumatic tendencies in the father or mother.

Constantly in our daily practice we feel the need of more accurate information as to antecedent illnesses, and often do we hesitate about prescribing a line of treatment through uncertainty as to the effects which the same treatment is said to have produced in former years. We cannot always depend on previous history, as given by the patient or his relations. We are often told that morphia, for instance, will not agree, or that owing to some supposed idiosyncrasy quinine or iodide of potash cannot be taken, or that salicylate of soda produced unpleasant effects. A glance at the life history would tell us whether these drugs had ever been given, or, if they had been administered, whether the effects produced had been toxic or only those ordinarily observed.

As it is useless to expect that the public will ever aid us in instituting such a scheme, it remains for us to do what best we can under existing circumstances. And very much can be

be done. When a family seeks our protection, a record should be at once begun. An inventory of the new possession should be made, and the course of the present and future disorders noted. Family histories and peculiarities should be inscribed and the effects of treatment recorded. Apart from their advantage in directing treatment, such records may assume an important legal bearing. Dates may thereby be fixed and medical evidence rendered more accurate. Very valuable, indeed, are such histories in the selection of lives for insurance, and in the case of disputed claims. Take, for instance, the case of an applicant whose family history is doubtful. Reference is usually made to the regular attendant, and it frequently happens that the information thus afforded is of a very vague and indefinite character, the result of careless observation and defective recollection. In the settlement of disputed claims, records give important aid, and this was illustrated in a case recently under our notice. A claim was disputed on the ground that a previous attack of acute rheumatism had not been mentioned in the application. Fortunately this attack had occurred in hospital. The case-book showed that the alleged rheumatism consisted merely of plantar pains, for which the applicant had remained three days in the wards. But for this hospital record the widow would have lost the amount of her policy.

Next, it becomes a question as to the best means to adopt to enable a medical man in fair practice to keep his records. We recommend the following simple plan. Let the practitioner provide himself with a supply of square sheets of paper of convenient size. At the right upper corner the patient's name should be inscribed. At the first consultation a few rough notes may be made which can afterwards be enlarged. Papers relating to the case, letters, etc., can at any time be attached to the main record. All these case papers can be alphabetically arranged and kept in a portfolio. Subsequently, when their number increases, they may be bound together in book form. This system has an advantage over the keeping of records in books, because each report can be separated for use in the preparation of papers, lectures, etc., and because those cases at the

moment in progress may be kept in a separate portfolio together. We undertake to say that with an expense of time of not more than half an hour a day the busiest of "busy practitioners" can keep a diary of his life's work which is bound to be of service to himself as well as to his clients.

Retrospect Department.

QUARTERLY RETROSPECT OF OBSTETRICS.

PREPARED BY J. C. CAMERON, M.D.,
Professor of Obstetrics, McGill University; Physician-Accoucheur to the Montreal Maternity, &c.

Adherent Placenta.—Dr. Berry Hart read a valuable paper on this subject before the Edinburgh Obstetrical Society in December last (*Edinburgh Medical Journal*). He was fortunate enough to obtain an inverted third-stage uterus with placenta adherent. He made microscopical sections of the entire thickness of the uterine wall and placenta by the celloidin process, in order to ascertain the difference of structure and arrangement in the serotinal layer as compared with a normal third-stage uterus with placenta attached. He found no evidences of inflammatory action in the spongy layer where separation normally takes place, but rather a defective development. Practically, separation of adherent placenta may occur in the three following plans: (1) where villi and serotina blend, (2) in the normal trabecular layer, (3) even at a superficial distance below muscle, usually only partial.

There is need of a good clinical classification, for cases of adherent placenta vary in degree from those simpler varieties where there is no hemorrhage in the third stage, and where the placenta is easily separated by the hand, up to those graver forms where there is profuse hemorrhage or where separation is very difficult, and where there is great subsequent risk of septicæmia. Dr. Hart suggests the following classification:—

1. Cases of total adhesion, unaccompanied by hemorrhage, where the separation of the placenta manually is easy, and is accomplished in the normal plane of separation.

This is the typical and easy variety. The patient has probably

suffered from endometritis previously, has had a slow second stage, and the placenta is not separated and expelled in the usual time. During the third stage the uterus may contract irregularly, forming nodules in its contour. If the placenta has not come away in three-quarters of an hour, the patient is to be placed in the dorsal position, the vagina douched with sublimate solution (1×3000), and an anæsthetic administered. One hand steadies and depresses the uterus, while the other separates the placenta from below upwards. Complete separation should be effected before an attempt is made to empty the uterus. After the uterus has been emptied, a hot antiseptic douche is administered. The unskilled operator sometimes experiences difficulty from passing his hand *inside* the membranes instead of *outside*.

2. Cases of partial adhesion high up in the uterus, where the placenta is separated in its lower part, often accompanied with serious hemorrhage. The upper adhesion is extensive.

This is a most serious complication at the time. The attachment above hinders uterine contraction, while below blood pours from the relaxed uterine wall denuded of its placenta. Massage, friction, ergot, hot and cold douching fail to check the hemorrhage, and immediate removal of the placenta is imperative. Whenever the ordinary measures fail to arrest hemorrhage during the third stage, it is safer to introduce the aseptic hand and peel off the placenta than to run the heavy risks of continuing hemorrhage. The greater the adhesion above, the greater the risk for the patient.

3. Cases of adhesion low down, the placenta being separated above ; not usually accompanied with hemorrhage.

4. Cases of very perfect adhesion usually accompanied with little hemorrhage, but where separation is effected manually with great difficulty. The placenta is usually separated where the villi and serotina meet, and thus the uterus is left with the usual deciduous layer of the serotina still adherent, and often with portions of the fœtal placenta attached.

These cases are not accompanied by flooding, but the union between uterus and placenta is so dense that separation is very difficult. A layer of dead tissue is left lining the uterus, and

septicæmia is very apt to occur. In such cases the most stringent antiseptic precautions must be adopted at the time of the operation and throughout the puerperium.

Accouchement after Extirpation of the Sacrum. (*La Semaine Médicale.*)—M. Lihotzky confined a woman upon whom Kraske's operation for cancer of the rectum had been performed. After the operation she enjoyed good health, became pregnant, and was safely delivered of a living child weighing about nine pounds and a half. It was interesting in this case to follow the mechanism of delivery on account of the absence of the sacrum as well as the muscles and ligaments of the pelvic floor. Delivery was normal, proving that in multiparæ or women with roomy pelves the presence of a resisting pelvic floor is not essential to the forward rotation of the occiput. The case is also of interest in proving that Kraske's operation is not necessarily a bar to subsequent child-bearing.

Precocious Menstruation. (*Brit. Med. Journal.*)—The case is reported by Dr. Diamant of Vienna. When a year old the child had cut all her milk teeth, and when barely *two* years of age she began to menstruate. The period lasted four days and recurred regularly for for four years. At six years of age the breasts, loins and pelvis were of adult type, and the axillæ and pubes thickly covered with hair. Menstruation then suddenly ceased, and for six months epileptiform convulsions occurred during sleep at the time the catamenia should have appeared. The fits lasted sometimes three-quarters of an hour, and were becoming more numerous every month. They were still continuing when the case was reported, the child being then six and a half years old.

Alcoholism of the Mother as a cause of Fœtal Death.—M. Charpentier recently reported a case to the Obstetrical Society of Paris (*Le Bulletin Médical*) which gave rise to some discussion. Seven years ago the mother was confined for the first time of a seven months child, which lived four years. After its death the mother, crazed with grief, became a dipsomaniac, and at the end of two years developed symptoms supposed at first to be due to acute general paralysis; but as alcohol was obtained

from the urine by distillation, it was finally concluded that the paralytic symptoms were purely alcoholic. Under treatment she recovered and shortly afterward became pregnant. Gestation was normal. Eight days before term the fœtus was well developed, living, and presenting by the head. Five days later movements ceased, and the following day the fœtus was born dead, slightly macerated, and presenting some phlyctenular spots on the body. In the discussion which followed, it was concluded that the fœtal death was attributable to maternal alcoholism, and Prof. Pajot expressed the opinion that in this young woman pregnancy should not be permitted to occur again for at least one year.

Puerperal Eclampsia.—M. Bar read a paper before the Société de Médicine Pratique on the causation of puerperal eclampsia, and reported a case (*Le Bulletin Médical*). His patient presented none of the usual premonitory symptoms of eclampsia, as albuminuria, etc., but was seized suddenly and died in twenty-four hours. The autopsy showed the kidneys to be normal, but the liver to be softened, friable, and the seat of grave lesions. Although albuminuria and eclampsia are closely connected in the majority of cases, and the kidney is generally found to be at fault, yet in a certain proportion of cases, as Tarnier has pointed out, the causative lesion is in the liver and not in the kidney. In such cases there is no premonitory œdema, and there may be no albumen in the urine up to the time of the first convulsion; the premonitory symptoms are pain in the hepatic region (more or less acute), and signs of commencing intoxication, such as headache, epigastric pain, and often mania. This form of eclampsia may be mild, but is often grave; when it proves fatal, there is coma with high temperature. Occasionally eclampsia may come on during the course of acute atrophy of the liver, beginning with a rigor, followed by fever accompanied sometimes by jaundice. Such cases are usually fatal.

The Microbe of Eclampsia in Gravid Women.—Dr. Emile Blanc has been for two years investigating this subject at the Lyons Obstetrical Clinic under the direction of Prof. Fochier, and now publishes the results in the *Lyon Médical*. Towards

the end of 1887, he found in the urine of an eclamptic patient in the Charité a peculiar microbe which he regarded as a micrococcus. He cultivated this microbe in bouillon and inoculated a rabbit under the meninges; it died in convulsions more marked on one side of the body than the other. He inoculated another rabbit in the auricular vein and produced infectious nephritis. On 21st February, 1889, a woman eight months pregnant took a convulsion while being examined previous to admission into hospital, and one hour afterwards took another. In the interval between the two attacks the urine was drawn off with careful antiseptic precautions, and two tubes of gelatine charged after Esmarch's method. White-bluish colonies of microbes soon developed, which did not liquify the gelatine. These microbes proved to be fine bacilli, with a dark spot in the centre resembling a nucleus, and capable of active movement. Cultivations were made in gelatine, agar-agar, potato and bouillon. The bouillon culture was used for a series of experiments on thirteen rabbits, a dog, a bitch, a pregnant guinea-pig and a rat. In the first series of experiments he inoculated the auricular vein of a rabbit eight days pregnant; convulsions began in one hour and proved rapidly fatal. Another rabbit inoculated with a very small dose of the same bouillon developed localized inflammatory œdema, followed later by gangrene and some slight constitutional symptoms. In a second series of experiments, non-gravid rabbits inoculated with somewhat stronger doses developed the same phenomena. Two dogs were inoculated, and in an hour convulsive spasms of the trunk began, returning every seven or eight seconds and persisting through a whole night. Another rabbit, pregnant three weeks, was then inoculated; in an hour it aborted and died in general convulsions. Those rabbits which resisted the first inoculation bore afterwards the infection of larger and stronger doses without general or local symptoms of any consequence. In a third series of experiments a pregnant guineapig was inoculated first in the peritoneum; for a day or two grave constitutional symptoms appeared, but it recovered. It was then inoculated in the jugular vein; severe dyspnœa soon began and the animal grew rapidly worse. It was finally killed when

in extremis. The autopsy showed profound anatomical changes; inoculation of the blood and urine reproduced the characteristic microbe. In another experiment upon a rabbit the urine was carefully examined; at first it was loaded with albumen and full of leucocytes and casts, then became scanty and finally suppressed, and, post-mortem, intense renal congestion was found with alteration of the epithelium. Different fluids (blood, urine, etc.) from the animals who died after inoculation readily produced the characteristic microbe in culture fluids, and when inoculated in other animals gave rise to the same symptoms and reproduced the same microbes. Prof. Fochier has always insisted that eclampsia is not a distinct disease, but a form of uræmia. In the light of these experiments, it is worthy of consideration whether the nephritis which so commonly precedes or accompanies eclampsia may not after all be an infectious condition due to the presence of microbes.

Creolin in Obstetrics.—The ideal antiseptic for obstetric purposes has yet to be discovered, one which is non-poisonous, non-irritating to the hands and tissues, non-corrosive to steel instruments, while at the same time it is an efficient germicide. *Corrosive sublimate* is the most powerful germicide used in obstetrics, but it has many disadvantages, and must be employed with great care. It roughens the hands of the operator, corrodes steel instruments, hardens and dries the genital tract, and sometimes leads to serious or even fatal consequences from mercurial poisoning. *Salufer*, a silico-fluoride of sodium, proposed last year by Mr. Mayo Robson, is non-poisonous and a good germicide, but it acts on steel instruments and the glaze of porcelain, discolors the finger-nails, and is not a good deodoriser. *Creolin* has been largely used in England and Germany, and seems to have given great satisfaction there. It is prepared from coal-tar by distillation, is a thick, syrupy, brownish liquid with a tarry odor and aromatic burning taste, soluble in alcohol, chloroform and ether, and forms an alkaline emulsion with water. It is non-poisonous, a good deodoriser, does not injure the hands or instruments, and has the very great advantage of lubricating the parts to such an extent that oil or vaseline is not required.

Possessing slight hæmostatic properties, it may be used with advantage to irrigate the uterus or vagina after operations or in cases of hemorrhage. Where there are perineal or vaginal lacerations to repair it is specially useful. In desperate cases of atony, where the uterine cavity has to be plugged, creolin may be used with advantage. Its action upon micro-organisms has been the subject of careful investigation by Prof. Attfield in England, by Esmarch (Koch's first assistant) in Berlin, by Eisenberg in Vienna, Kortüm and others. As the result of their experiments it has been shown that a five per cent. solution of creolin destroys all pathogenic organisms immediately; a three per cent. solution produces a similar action in about one minute; a one per cent. solution retards the growth of micro-organisms to a considerable extent. Compared with carbolic acid, a three per cent. solution of creolin is equivalent to a five per cent. solution of carbolic, and a two per cent. solution of creolin to a three per cent. of carbolic. In the Munich klinik creolin and sublimate were compared in 280 consecutive confinements, each disinfectant being used in an equal number of cases. With the sublimate, there were two cases of severe and thirteen of mild septic infection; with creolin, no cases of severe and seventeen of mild sepsis. Most of the cases of mild sepsis occurred when only the one-half per cent. solution was used. For vaginal irrigation after labor, two per cent. solution should be used; for uterine douching, one or two per cent. If the lochia are beginning to be offensive, one per cent. is strong enough. Creolin soap is valuable for cleansing the hands before and after examinations or operations. The best preparations of creolin are *Jeyes' Liquor Antisepticus* for medical and surgical purposes, *Jeyes' Fluid* for general domestic purposes, and Jeyes' 10 per cent. surgical soap for the hands. These preparations are in constant use in the Montreal Maternity, and give the greatest satisfaction.

Temperature and Pulse Curves in the Puerperal Period.—Drs. Temesvary and Bäcker have recently made elaborate investigations in Prof. Kézmarszky's klinik in Budapest to determine the normal temperature and pulse curves of the puer-

peral period (*Archiv für Gynäkologie*). The temperature was taken in axilla, rectum and vagina, but it was soon apparent that the axillary temperature is not only more conveniently taken, but also, on the whole, more accurate and less liable to fallacy. During the period of gestation the temperature was found to be quite normal, there being no difference between that of the earlier and later months.

Temperature immediately after the conclusion of Labor:—Much depends upon the duration, difficulty and time of the labor. The temperature is higher in primiparæ than multiparæ, and higher after a difficult or irregular labor than after an easy or regular one. As a rule, the longer the labor the higher the temperature rises afterwards. The temperature is higher after labors ending between 10 A.M. and 12 P.M., showing that the normal daily variation of temperature in the human body exercises a certain influence. With regard to the prognostic value of the temperature immediately after labor, it may be inferred that in high temperatures there is generally trouble ahead, in slight rise of temperature the prognosis is doubtful, in normal or subfebrile temperatures the prognosis is generally good, though not necessarily so. In those cases where a normal or subfebrile puerperium followed, the temperature just after labor was over 99.5°F. (37.5°C.) in only ten per cent.; but where there was subsequently a febrile puerperium, the temperature was above that point in twenty-one per cent.

Temperature on the first day of the Puerperium.—After *regular* labors the temperature rises continuously and reaches its maximum in six to seven hours, then it falls steadily for ten to twelve hours, and reaches its minimum sixteen to nineteen hours after delivery. The remission is greater than the rise, because at the conclusion of labor the temperature is above the normal. In primiparæ the temperature two to three hours after delivery is almost half a degree higher than in multiparæ, but in eighteen to nineteen hours the effects of the more severe labor have passed off and there is no longer any marked difference between them. After *irregular* labors the temperature is $\frac{1}{2}^{\circ}$ to 1° higher than after regular labors, and it takes a propor-

tionately longer time to fall to the normal. A normal temperature curve for the first twenty-four hours is a favorable prognostic as far as it goes, but of course is no guarantee of a subsequently favorable puerperium.

Temperature of the Second to the Eighth Day.—In the puerperal woman free from fever and making a normal convalescence the average temperature does not vary from day to day more than .11°–.56°F. (.06–.31C.) But there are diurnal variations corresponding to those which are normal and physiological which must be borne in mind if we would estimate correctly the temperature at any given time or compare the temperature taken at one time of the day with that taken at another. The temperature rises from 4 A.M. to 10 A.M., remains fairly constant till 6 P.M. (with slight variations after meals), then falls steadily from 6 P.M. to 12 P.M., and remains at its minimum till 4 A.M., when it again begins to rise. The difference between the maximum and minimum is 1.2°–1.4°F. (.67°–.79C.), or on the average 1.3°F. (.73C.), which corresponds to the daily variation in healthy persons. The diurnal variation is the same in primiparæ as in multiparæ. At 6 A.M. and 8 P.M. the temperature is very nearly that of the average for the day; so that if in any case the temperature be taken every day at those hours, a record of the average daily temperature may be obtained which will be tolerably accurate.

If it be required to get a more exact record of the average daily temperature, four observations may be taken and made to check one another as follows:—

$$\frac{8\text{ A.M.} + 10\text{ P.M.}}{2} = \frac{2\text{ A.M.} + 2\text{ P.M.}}{2}$$

2 A.M. = 36.46C.
8 A.M. = 37.03C.
2 P.M. = 37.19C.
10 P.M. = 36.64C.

If the four observations are as follows: then

$$\frac{37.03+36.64}{2} = 36.83$$—average temperature.

$$\frac{36.46+37.19}{2} = 36.82$$—aver. temp.

The results of all these observations show that the temperature of puerperal women under regular conditions and with a regular course of the puerperium corresponds entirely with that of

healthy women, not only as regards its average height, but also as regards its diurnal variations, and if on any particular day of the puerperium there is somewhat greater variation, it is still within the limits of normal body-heat.

The Pulse during the Puerperium.—As a rule, the pulse begins to slow down immediately after labor, and slows steadily for the first eight days of the puerperium. It is most rapid at the beginning of the first puerperal week, least rapid at its end. This slowing is equally marked in primiparæ and multiparæ, and amounts in the week to nine or ten beats per minute. Beginning at 61, it falls to 50–51. There is a diurnal variation in the pulse-curve as in the temperature-curve. The pulse is slowest at midnight and quickest at 8 A.M.; it rises most from 6 A.M. to 8 A.M. and from 12 to 2 P.M. The difference between the maximum and minimum rate any one day is on the average seventeen beats (60–77). The pulse rises after meals. The slowest pulse taken during these observations was 36, which was found on two occasions in nursing multiparæ on the seventh day. Blot and Depaul have observed a pulse of 35 in the puerperium, Olshausen and Quinquaud 34, while McClintock has reported a pulse of 30 after the birth of triplets. This is the slowest puerperal pulse yet recorded. The main cause of pulse-slowing in the first puerperal week is probably the altered condition of the blood, while physical and mental repose is probably a subsidiary fretor. Has the pulse rate any prognostic value? As long as the pulse remains slow the puerperal patient is not suffering from any serious febrile disturbance, but as soon as febrile symptoms appear the pulse rises. If there is elevation of temperature without corresponding rise of pulse, the febrile disturbance is probably only ephemeral. Of course a diagnosis or prognosis cannot be safely based upon the consideration of a single symptom; the pulse-rate must be considered along with the temperature-curve, and the other symptoms subjective and objective.

QUARTERLY RETROSPECT OF SURGERY.

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Lateral Anastomosis of the Intestines by Senn's Bone Plates. Catgut rings recommended as a substitute.—In addition to the four cases already reported by Senn, Dr. Robert Abbe (*New York Medical Journal*, March 23rd, 1889) reports another, in which complete obstruction of the colon was successfully relieved by using bone plates. The case was one of carcinomatous obstruction in a man aged 60, in which, under cocaine anæsthesia, the abdomen was opened and the colon found greatly distended. A temporary artificial anus was established, giving escape to a large amount of fæces. Six weeks later an operation was performed to overcome the obstruction caused by the cancerous stricture. This was done very rapidly by the use of Senn's plates. Dr. Abbe says that the bone plates one can secure from the makers seem to be limited in size, so that an aperture between two intestines of an inch and a half is about the largest obtainable. The plates take many days to prepare, and the larger ones do not preserve their shape as well as the smaller ones. The preparation of decalcified bone plates involves two or three days' maceration in dilute ten per cent. of hydrochloric acid, then washing half a day, and compressing between blotting pads, with flat pieces of tin on either side, until quite dry. They warp if not tightly compressed. An oval opening has then to be cut or drilled in the plate, as well as openings for the threads. Finally, the threads have to be secured and connected each with the other by a method not easy to carry out. Dr. Abbe thinks that an effective substitute for the plates will be welcome, and suggests rings of the heaviest catgut softened in water until it ceases to twist upon itself. It is then formed in a ring of four strands on the ends of three fingers, and wound over and over with the same sized gut tightly applied. When completed the ring is stiff and flat, with no disposition to curl. The threads are quickly and simply adjusted around the ring, and insure its making a firm pressure until it has dissolved in the bowel. Such

a ring will need six threads attached to it in place of four, as in Senn's plates. Each thread should be armed with its own needle. Dr. Abbe has used this catgut ring on a large dog; nine days later the dog was killed, the anastomosis between the two parts of bowel was found to be completely established, and the rings had dissolved away. Since then, Abbe carried out his suggestion in a case of fæcal fistula (editorial *Medical News*, April 13, 1889), and the rings were used efficiently. In addition to the threads, Lembert's sutures should be used in the interspaces between the threads. Abbe also suggests that the gut should not be laid side by side with the ends together, but with ends looking opposite ways, then the peristalsis would be in the same direction for both parts. Senn has shown that the cementing of the apposed serous surfaces by plastic exudation during the first five or six hours is sufficient to hold the parts together, but in forty-eight hours union is so firm that severe internal pressure will not part the wound.

At a meeting of the Medico-Chirurgical Society of London, held March 12th, 1889, Mr. F. B. Jessett communicated a paper on the results obtained from an experimental investigation into a novel mode of operating on the intestines (*Lancet*, March 16, 1889) which strikingly confirms the value of lateral anastomosis. The operations were performed on dogs, and consisted of (1) gastro-enterostomy, jejuno-enterostomy; (2) circular enterorrhaphy; (3) ileo-colostomy. Bone plates and India-rubber rings were used. The latter were used in the following way. The portion of intestine being removed, a narrow band of India-rubber was cut the exact size of the circumference of the upper portion of the divided gut; this was formed into a ring by two catgut sutures. This ring was next pushed into the gut and fastened around its free edge by a continuous catgut suture. Two threads armed at either end with a common sewing needle were prepared. One thread passed through the upper end of the India-rubber ring, now fixed in the intestine, and all the coats of the bowel, the needles being passed one on each side of the mesentery. The needles of the other thread were passed equi-distant through the rubber ring and coats of the intestines on the convex surface.

The needles were next passed through the serous and muscular coats of the lower portion of the bowel about one-eighth of an inch from its cut edge at corresponding points; these threads were drawn tightly and the upper portion of the intestine invaginated into the lower, so that the two peritoneal surfaces were in close contact, and the threads were tied sufficiently tight to prevent disinvagination. The bowel was then dropped into the abdomen and the wound closed. The operation as at present practised with the Czerny-Lembert method showed a mortality of 86.6 per cent. as against 24.99 per cent. in those cases of enterorrhaphy performed by Senn's method of invagination, or 7.69 per cent. of those performed by means of approximation discs. The advantages claimed were simplicity, expedition and better results, only four to six sutures were used instead of fifty to sixty by the Czerny-Lembert method, and twenty minutes would complete the operation as against one hour and a half by the old method.

In a letter to the *Medical News*, May 4th, 1889, Dr. M. E. Connell states that a good and easily obtained substitute for Senn's plates is found in the cartilage of the scapula of a young steer. The material may be carved in segments and cut to any size, and has proved successful in dogs which have been operated on.

On a Method of Operating so as to Lessen the Dangers of Exsection of Intestines.—Dr. E. Hahn (*Berlin. Klin. Woch.*, June 25th, 1888) advocates a new method of resection of the intestines and suture of divided ends in cases of strangulated hernia with gangrenous intestine. The peritoneal opening, after the relief of strangulation, is enlarged and the intestine drawn down and ligatured above and below the gangrenous part and resected. The cut ends are thoroughly disinfected and stuffed up to the ligature with iodoform gauze, which is kept in place by a stitch. The ends of this stitch are left long, so that when grasped by forceps passed through the mesial abdominal wound they may serve to pull the ends of the intestines through. An incision six to eight cm. long is next to be made in the linea alba, extending from just below the umbilicus to the level of a line

joining the two anterior superior spines. The centre of this incision will be nearly opposite the point where the mesentery crossed from left to right. The surgeon, after carefully protecting the divided intestinal ends from further contamination by inserting gauze into the original intestinal wound, now passes a pair of forceps from the mesial to the groin wound, and draws them through by the threads left for the purpose. Afterwards he packs the groin wound with gauze and then proceeds to suture the intestine. The mucous membrane is treated with continuous sutures, the peritoneum with Lembert's suture. After the sutured intestine has been again bathed with lotion (two to three per cent. of acid carbolic preferred), it is returned into the abdominal cavity, but to prevent risk of escape of fæcal matter, and to keep the sutured part in position, strips of iodoform gauze are packed around on each side as far as the mesentery. The ends of the strips are left to project at the wound. The sutured part of intestine is thus kept at the level of the parietal peritoneum, opposite the wound, and may be inspected at will by removing an extra piece of gauze which is laid over it. To keep the gauze in place, and to prevent prolapse of intestine from cough, two or three superficial stitches are inserted and knotted over the gauze.—(*Annals of Surgery*, May 1889.)

The Radical Cure of Inguinal Hernia.—Dr. Chas. McBurney on February 21st, 1889, read a paper on the above subject, in which he advocated treatment by open incision (*New York Medical Record* and *New York Medical Journal*, March 23rd, 1889). After reviewing the various methods of treating inguinal hernia by operation, he described the operation practised by himself. He began his operation by making a free incision from a point on the abdomen above the internal ring downward and inward, so as to lay open the whole canal. The spermatic cord was separated and the sac dissected out to its very point of origin. It was then opened, any contained intestine reduced, and any pieces of omentum tied off. The sac was now held up and the finger inserted to prevent the descent of the intestines; it was then tied off close to the internal ring. The conjoined tendon was then brought down, as in Macewen's operation.

Then he proceeded to make an open wound by turning in the integument and suturing it to the superficial layers of muscle; he also passed several deep tension sutures. The wound was then packed with iodoform gauze and a suitable dressing applied. The urine was withdrawn by a catheter for a few days to avoid soiling the dressings, and in the case of children a plaster of-Paris dressing was used to give additional security, with a coat of shellac added in female children. The supine position was to be maintained during the five or six weeks necessary for healing to become complete, but it was time well spent, for the scar would thus be stronger and the patient got up finally free from the "slavery of a truss." He said that he could safely say of his method that it was the only one which really secured an obliteration of the sac, a union of the walls of the canal throughout its length, and a minimum risk of abscess or infection. It was applicable to every variety of hernia, and cure was effected rapidly. In thirty-six operations of every sort in which he had used this method he had had one death, and that from alcoholic delirium. There had been one relapse. Two patients had passed out of sight and three were still under observation in hospital, but there was every reason to believe the remainder were permanently cured.

In the discussion which followed the reading of the paper, Drs. L. A. Stimson and R. Abbe strongly recommended the operation. Dr. Abbe said he had operated for hernia 117 times, 52 times by Macewen's method, and he preferred McBurney's operation, because it was simple and required no special skill.

Its simplicity is certainly a great recommendation; besides, it is an operation which will lessen greatly the danger of septic infection. The time taken is rather advantageous than otherwise, and in an operation by any method it is important to keep the patient in bed six or eight weeks to consolidate the new tissue.

Excision of Bone to promote Healing of Soft Parts.—At a meeting of the Medical Society of London, held Feb. 11th, 1889, Prof. Annandale of Edinburgh (*Lancet*, Feb. 16th, '89) read a paper on excision of bone in order to promote the healing of certain ulcers or wounds or to relieve contraction resulting in

connection with this process. He remarked that the proceeding was not new, and that his first experience of it was in the practice of the late Mr. Syme, more than twenty-five years ago, since which time he had himself operated on several cases. He considered the subject under the following four heads: (1) The removal of a portion of bone not including its entire thickness. (2) The excision of a portion of the entire thickness of a bone or of two bones (as in leg and forearm). (3) The partial or complete excision of a joint when the sore or contracture involved the soft parts in its neighborhood. (4) The excision of a portion of the entire thickness of one or other of the bones of the forearm or leg in order to allow the proper approximation of the ends of its companion bone which had suffered some loss of substance. Illustrative cases were detailed; one of the most interesting of these was one in which Mr. Annandale had removed two inches and a half of the shafts of the tibia and fibula in order to promote contraction and healing of a large sore on the leg. The case was perfectly successful. In conclusion he stated that as a primary operation in cases of injury this procedure was not likely to be useful except in rare cases, as it was impossible in the first instance to be certain of the exact amount of the loss of the soft parts, and he expressed a hope that the experience of the operation referred to would encourage surgeons to make use of the principle in suitable cases.

Mishaps from the Use of the Aspirator.—Accidents following the use of the aspirating needle are not common, still cases do occur and sometimes result fatally. Dr. J. M. Ball (*New York Medical Record*, March 9th, 1889) relates a case in which "the needle of an aspirator was plunged past the right pleural cavity, through the diaphragm, and into the liver, with fatal result." The case came before the courts, and at a second trial the doctor was fined fifty dollars damages. The patient was a strong, robust and healthy man of 38 years, a farmer. He contracted a severe cold. When the doctor was called in he found marked dulness over the right side of the chest, extending downward from about one inch above the nipple. The chest was aspirated in the right axillary line, between the sixth and seventh ribs.

The needle was first introduced about an inch, and then finding no fluid, it was plunged deeper. The aspiration was performed on Thursday, and immediately after the breathing became rapid and difficult, and there was great pain in the right hypochondriac region; in twenty-four hours patient was delirious and his abdomen tympanitic and swollen; on the following Tuesday he died. The post-mortem showed that the thoracic organs were healthy, except the lower lobe of the right lung, which was the seat of hepatization. The abdomen showed evidences of acute general peritonitis. The superior surface of the liver presented a wound about one and one-eighth of an inch in length and varying from one-eighth to three-tenths of an inch in depth. Between the superior surface of the liver and the under surface of the diaphragm, and adherent by plastic exudation to the latter, were several flattened clots of blood each about the size of a half dollar. The diaphragm, at a point corresponding to the wound in the liver, presented evidences of an intense inflammation. The length of the needle used was $3\frac{1}{2}$ inches.

This is a remarkable case, and one which is very instructive. The abdomen and liver itself is not infrequently explored by the aspirating needle without any ill results following. In this case there was slight hemorrhage no doubt, and the upper surface of the liver was wounded, but it seems to me that if the needle had been perfectly aseptic a fatal result would not have ensued. This is a point which, however, was not touched upon in the trial—several questions were asked the experts about the parts that could be wounded by a needle passed through the sixth or seventh spaces on the right side.

In the *Lancet* of Feb. 2nd and 9th, 1889, a case is reported where general subcutaneous emphysema followed aspiration of the chest. The case occurred in the Victoria Hospital for Children, and was under the care of Dr. Evans. The patient was a child aged eighteen months, and had been under treatment for broncho-pneumonia. The lungs had cleared, except at the right base, where there was persistent dulness with tubular breathing. Thinking that perhaps there was a localized empyema, a full-sized aspirating needle was introduced just below the angle

of the scapula, but no fluid was obtained. The needle was withdrawn and the puncture closed with wool and collodion. Two hours later there was subcutaneous emphysema extending from the seat of puncture, over the trunk, and up the right side of the face; in six to eight hours the swelling had involved the whole trunk and scrotum and formed a prominent collar around the neck, the eyelids were puffy, and the right eye closed. After twenty-four hours the swelling began to subside, but it was nearly a fortnight before all the swelling had disappeared. For the first three days the temperature was as high as 102°. The child died some time after of diphtheria, and at the site of the puncture the pleural sac was obliterated. The lung was firmly adherent to the chest wall, and contained a number of dilated bronchi. The needle had probably entered one of these dilated tubes.

Excision of Dislocated Semilunar Cartilage.—At a meeting of the Clinical Society of London, held on the 25th of January, 1889 (*Lancet*, Feb. 2, 1889), Mr. H. W. Allingham read a case of removal from the knee joint of a dislocated internal semilunar cartilage. The patient was a youth aged 20, and the injury was caused by violence whilst playing football in October, 1887. The knee at the time became swollen. He could not use his knee freely on account of the pain; every exceptional exertion produced the sensation of his leg being broken at the knee. Soon every slight stumble caused pain. In Sept. 1888 Mr. Allingham saw him and found on the inner side of the knee, in the interval between the tibia and femur, a hard, fairly movable body about an inch and a half in length. The knee-joint was opened on the inner side by an antero-posterior incision two inches in length. The movable body proved to be the internal semilunar cartilage torn away from its anterior attachment. He could not pull it out because it was firmly attached posteriorly, so a pair of scissors was introduced into the joint and the cartilage was cut off as close as possible. The wound was then sutured, great care being taken to bring together the synovial edges. The patient made a complete recovery, and a few months afterwards could move his joint freely in every direction; he could walk and run as if nothing had happened to the joint.

Mr. Thomas Annandale (*British Medical Journal*, Feb. 9th, 1889) also reports a case of *Excision of the Internal Semilunar Cartilage, resulting in perfect restoration of the joint movements.* He says that further experience of cases of dislocated semilunar cartilage has confirmed his opinion that no mechanical appliances will cure cases in which the semilunar cartilages are much separated from their attachments or otherwise injured. The case is as follows: A strong, healthy miner was first seen at the Royal Infirmary on July 11th, 1888. Eleven months previously a mass of coal fell on his leg and knocked him down. In his struggles to get up he gave his knee a severe twist, and it was with some difficulty that he got home. The joint swelled and was stiff for some days. After returning to work he found that the movements of the joint were uncertain, and that sometimes it would suddenly become "locked." He felt something moving in his joint, and when the knee became fixed it required some little manipulation to restore its movements. An external examination did not detect any unnatural condition except there was slight effusion into its cavity. On the 18th of July Mr. Annandale exposed the affected cartilage and freely opened the joint, when the injured cartilage came into view; the greater part of the cartilage was removed; the wound was closed, no drainage being employed, and the patient made a perfect recovery. He was last seen in December, when it was found that the joint movements were perfectly natural, and he could successfully carry on his employment. Mr. Annandale has already frequently operated on displaced cartilages successfully by bringing them into proper position and securing them there with catgut sutures. His first operation was performed as far back as November 1883.

Insanity following Surgical Operations.—Mr. C. T. Dent has an interesting article on the above subject (*Jour. of Mental Science*, April 1889). He says that in three ways a surgical operation may produce physical disturbance (1) by anticipation, (2) by the actual operation, and (3) by the after effects. A more important factor still in producing physical disturbance is mental reaction. The importance of this factor is usually under-

rated. Mr. Dent speaks of the various degrees of mental disturbance occurring in the following order. Emotional disturbance, hysterical disturbance, loss of control, unreasonableness, delusions and hallucinations, and mania in its various forms. Mr. Dent is not inclined to agree with Dr. Savage that many of those cases of insanity following operation are due to the effect of the anæsthetic, but says that the shock of an operation may act like any other shock and give rise to insanity in a person of mental instability. In the majority of cases, however, which he has seen or collected there was no history of mental instability either natural or inherited. And he calls attention to the class of cases in which, after the operation, the mind reverts to its normal condition, but subsequently, after a greater or less lapse of time, symptoms of mental disorder begin. Four cases occurring in the author's practice are detailed, one of which ended fatally—a case of ovariotomy. In only one was iodoform used, and in all the insanity came on some time after the operation. Mr. Dent says the anæsthetic factor cannot be altogether excluded, and that when the mental disturbance is the direct and immediate sequel of the anæsthesia, it is probably due to the anæsthetic. (Why not to the shock of the operation?) He also states that when acute mania occurs shortly after a serious operation the prognosis is always grave, even though the wound be going on well. The more chronic the mania the better the prognosis as far as life is concerned. If the wounds do badly the mania is apt to become chronic; if they do well, the prognosis will be favorable. The author's own impression is that cases of mania after operations are not nearly so infrequent as is commonly supposed, and that many of these cases are set down as delirium tremens, or due to septic conditions.

Dr. Savage (*British Medical Journal*, Dec. 3, 1887) reports a number of cases of insanity following the use of anæsthetics in operations and otherwise, and in most of the cases reported by him there was a distinct family history of insanity.

The writer has reported (*American Journal of the Medical Sciences*, Dec. 1888) six cases of mania following operations, two of which resulted fatally and one never recovered complete

sanity. In all the cases acute mania rapidly followed the operation. In two there was a distinct history of insanity, one was an epileptic, and one a confirmed drunkard. In this paper the writer says that "in persons who have a strong predisposition to insanity, or who have suffered from previous attacks, the surgeon should consider whether it is advisable to operate on such individuals when the operation is of no great urgency and is not essential to the prolongation of the patient's life."

Cases of insanity, melancholia, etc., are reported from time to time following operation on the genital tract, and quite recently Dr. Thomas of New York (*Philadelphia Medical News*, April 13th, 1889) has drawn attention to the comparative frequency of their recurrence. He includes in his cases mania following excision of the breast for carcinoma or tumor. Six cases are reported, four of which died—viz., one ovariotomy, one perineorrhaphy, one laceration of cervix, and one excision of breast.

There is no reason to believe that mania follows more frequently gynæcological than other operations in surgery, and it is most important, in all operations on the genital tract and elsewhere, to consider carefully not only the family history but the mental condition of the patient. In one case operated on lately by the writer, no anæsthetic was given because the patient had been insane on several occasions, and once after the administration of ether for examination purposes. The operation (removal of a sublingual dermoid cyst) was performed without anæsthesia, and there was a rapid and complete recovery without any mental disturbance whatever. In this case an anæsthetic, I have no doubt, would have precipitated an attack of insanity. I cannot agree with Mr. Dent in attributing these cases of mania immediately following the operation to the anæsthetic, for why should not the shock of the operation act as rapidly, and are not cases on record of insanity immediately following an injury when no anæsthetic was given. The subject is full of interest, and it is only now that surgeons are awakening to its importance. No doubt in a short time sufficient data will be available to formulate some definite conclusions.

Rupture of the Quadriceps Extensor Tendon.—Dr. W. T. Bull (*New York Medical Journal*, April 20th, 1889) reports a case of the above successfully treated by suture of the separated ends. (This case was presented at the meeting of the New York Surgical Society, Feb. 27th, 1889.) A table of twenty cases is given where this accident was treated by plaster-of-Paris bandages or posterior splint, and also four cases treated by suture. In these latter the result was excellent. He suggests that in case of rupture, where the separation between the ends of the tendon is trifling—say to the width of an inch or a finger's-breadth—as well as in those where there is no effusion into the joint, the treatment should be by posterior splint or plaster-of-Paris bandage after drawing down the muscle and fixing it by bandaging from above downwards. The patient may begin to walk at the end of four weeks. Where, however, the ends of the tendon are widely separated, say two finger-breadths, or where the joint capsule is distended, the suture should be resorted to at once.

Inguinal vs. Lumbar Colotomy.—At a meeting of the Harveian Society of London, held March 28th, 1889 (*Lancet* and *British Medical Journal*, May 4th, 1889), Mr. Harrison Cripps, after giving an account of the history of colotomy, and drawing attention to the improvements in detail introduced by Mr. Bryant and Mr. Davis-Colley to the lumbar operation, further called attention to the work of Messrs. Reeves, Lawson Tait, Chavasse and Allingham in re-introducing the inguinal or intra-abdominal method of opening the bowel. He recorded 37 consecutive cases, 15 of lumbar and 22 of inguinal colotomy, nearly all the cases being undertaken for malignant disease. There was but a single death in each series of cases, thus the mortality was a little over five per cent. He considered inguinal a vastly superior operation to lumbar colotomy. There were certain grave objections to the lumbar operation; amongst these were the depth of the bowel in a fat subject and the very limited space in which the surgeon had to work. Then, again, there was often difficulty in recognizing the colon, so that numerous mistakes had been made in opening the small intestines and even the stomach. The

gravest objection, however, was that occasionally the course of the colon was so abnormal that it was quite impossible to find it in the lumbar wound. The inguinal operation met all these objections. There was plenty of space and the bowel could be absolutely identified, there was no tension on the stitches, and little difficulty in finding an abnormal colon. Moreover, the inguinal operation had one great advantage, viz., that of enabling the abdomen to be explored and the site of the obstruction to be verified before opening the bowel. The objections raised to the inguinal operation were the subsequent prolapse of the bowel and its unsuitableness for urgent cases. In the author's experience prolapse was not more frequent in one case than the other. As to urgency, he had no hesitation in opening the bowel immediately, as was done by him in two cases with a perfectly successful result. The operation was performed as follows: The incision, two and one-half inches in length, crossed an imaginary line drawn from the anterior superior spine to the umbilicus, an inch and a half from the former bony point. The peritoneum being reached, it is pinched up by fine forceps and an opening made sufficient to admit the finger; it is then divided on the finger by scissors. The colon being found, a loop of it is drawn into the wound. In order to avoid prolapse, which is likely to occur if loose folds of the sigmoid flexure remain immediately above the opening, Mr. Cripps gently draws out as much loose bowel as will readily come, passing it in again at the lower angle as it is drawn out from above. In this way, after passing through one's fingers an amount varying from one to several inches, no more will come. Two provisional ligatures of stout silk are passed through the longitudinal muscular band opposite its mesenteric attachment. The provisional ligatures, the ends of which are left long, help to steady the bowel during the subsequent stitching of the skin; they should be about two inches apart. The bowel should now be returned temporarily into the peritoneal cavity, and then the parietal peritoneum should be stitched to the skin on each side of the incision, the muscular wall not being included; four sutures on each side are sufficient. The bowel is again drawn out and stitched to the skin and parietal peri-

toneum by seven or eight fine sutures on each side, the last suture at each angle going across from one side to the other. The bowel should be so attached as to have two-thirds of its circumference external to the sutures. If all goes well, Mr. Cripps prefers waiting until the fifth or sixth day before opening the bowel; but if the abdomen becomes distended, or there is the slightest vomiting, he advises immediate opening of the bowel. Firm pressure by a pad and several turns of a bandage were important for the first few days, for should vomiting occur the bowel is liable to break away from its stitches. The ligatures may be safely removed on the ninth day.

Mr. Chavasse of Birmingham, in a clinical lecture on *Sigmoid Colotomy* (*Lancet*, January 5th, 1889), says the advantages of this operation are—(1) it is readily performed; (2) the false anus being in front is easily attended to by the patient himself; (3) the patient is able to lie on his back without discomfort; (4) four or five inches more of the colon are left to perform its duties; (5) the limits of the growth are more easily ascertained. Mr. Chavasse has performed this operation thirteen times for malignant disease of the rectum, and has had no ill results. Should the obstruction of the bowel not be complete, he recommends the procedure advocated by Mr. Herbert Allingham. This is to form a "spur" which shall cause a division of the sigmoid flexure into distinct upper and lower openings. A carbolized silk ligature is passed through the edge of the skin incision half an inch from the lower end of the wound, through the mesentery of the flexure and back through the mesentery and skin close to the point from which it started; a loop is thus formed, securing a portion of the mesentery, and the free ends are tied tightly together. Another method which is performed extensively in Germany is to completely divide the colon, close the opening in the lower portion by sutures and drop it back into the abdominal cavity, bring out the upper end and fix it to the wound. This method has the disadvantage of immediately evacuating the fæces and runs the risk of allowing some to enter the peritoneal cavity.

At a meeting of the London Medical Society, held Jan. 14th,

1889, Mr Herbert Allingham read a paper on *An Important Supplement to the Operation of Inguinal Colotomy* He had observed, after several of his cases of inguinal colotomy, that the patients had suffered from a distressing procidentia of the intestine through the opening. He came to the conclusion that this only occurred when the sigmoid mesentery was of considerable length. To prevent procidentia in these cases he pulled out through the wound all the intestine that would possibly come forth; these portions he allowed to rest on the abdomen, and then sutured. From twelve hours to three days afterwards he entirely removed all these pieces of intestine, first of all applying a clamp about an inch from the wound to prevent the intestine slipping. Experience taught him that the clamp must be spiked, and must preserve a *firm*, tenacious grip, otherwise severe hemorrhage might ensue. The clamp should be allowed to remain on for twelve hours. He admitted that this further procedure, by increased danger of hemorrhage, aggravated the seriousness of the operation. He had treated five cases in this way. The chief points in the operation were: (1) The fact that pain occurred when cutting through the mesentery, but not in dealing with the intestine proper. (2) The supreme importance of using a spiked clamp that would under no circumstances slip or relax its hold; its correct use would prevent hemorrhage, the only thing to be feared. (3) The great length of intestines removed; he had removed from four to twelve inches. He advocated this method in lumbar colotomy where procidentia occurred.

Tapping and Irrigation of the Ventricles of the Brain.—At a meeting of the Philadelphia County Medical Society, held Feb. 13th, 1889, Dr. W. W. Keen read a preliminary report on the above subject (*Medical News*, March 9th, '89). Last autumn he made a proposition for tapping the lateral ventricles. At that time he was not aware that the procedure had ever before been suggested, but he has recently learned that, in 1881, Wernicke suggested it in a general way by the lateral route. The operation, however, Dr. Keen believed, was never performed until he did it in a case of marked choked disc on both sides, with com-

plete blindness dating from last Christmas. He tapped the ventricle five weeks previously, reaching it by the lateral route at a depth of $1\frac{3}{4}$ inches from the dura mater. A half inch trephine opening was made, a crucial incision in the scalp and dura mater employed. From two to four ounces of cerebro-spinal fluid escaped from this opening daily. After a week the discharge increased to four to eight ounces daily, when a horse-hair drain was used. On February 8th he trephined the opposite side, thinking there might be a tumor on the posterior lobe on that side, but he found none. On February 12th he washed out the lateral ventricles, passing about eight ounces of a solution of boracic acid (4 grs. to 3i) from one side to the other. There was some little irritation resulting from manipulation, but the moment the warm solution began to pass through the ventricles the child settled itself into a position of complete comfort. The child did not suffer any notable rise of temperature after the operation.

Treatment of Cystic Tumors.—Dr. Barthe, physician to the Broussais Hospital, has published a note on a new method of treatment applicable to synovial cysts, sebaceous wens, and, in general, to all cystic tumors of the skin and of superficial regions. Starting on the principle that arsenical injections determine a moderate inflammation of the tissues which does not go on to suppuration when certain very simple precautions are taken, and which is often followed by an atrophic process, the author considered this remedy a convenient means of treating certain tumors which are benign in their nature, but are inconvenient, and for which one often hesitates to advise a surgical operation. The first case tried was that of a girl, aged 12, with a synovial cyst of the wrist, the size of a walnut, of several months duration. Two minims of Fowler's solution of arsenic were injected into the cavity of the cyst. The operation produced sharp pain; next day there was swelling and tension of the sac. This soon diminished, and in ten days the tumor had entirely disappeared without leaving a trace of its existence. He has treated other cystic tumors with equally good results.—(*Paris Cor. of N.Y. Medical Record*, April 27, '89.)

Surgical Treatment of Purulent Pericarditis.—At a meeting of the Clinical Society of London, held November 23rd, 1888, Dr. Dickinson reported a successful case of purulent pericarditis treated by free incision and drainage. This is now the third successful case published which has been thus treated. The first two cases are reported in the Transactions of the Royal Medico Chirurgical Society, vol. xlvi. (1883), by Dr. S. West. Many fatal cases have been recorded. Purulent pericarditis is usually such a fatal disease that severe measures may be justifiably employed for its treatment, and although the physical signs which accompany it do not always enable physicians to diagnose with certainty between it and serous pericarditis, it is always possible to undertake a puncture for diagnostic purposes. In Dr. Dickinson's case Mr. Rouse performed the operation, and the fifth right interspace was chosen for incision. The pericardium had previously been aspirated several times, and once as much as 19 ozs. of pus drawn off, much to the relief of the patient, but the pus again collecting, and the general symptoms becoming distressing, incision was performed and a tube introduced. In two months the patient, a lad of 10 years, was perfectly well.

In the discussion which followed several cases were narrated. Dr. West said that, as a rule, the most suitable place for puncture was in the fifth left interspace, close to the sternum. Mr. Godlee drew attention to some anatomical features. In children the left pleura so far covered the anterior surface of the pericardium that if the puncture were made an inch away from the side sternal line the chance of the instrument laying open the pleura before reaching the pericardium was very great, and pneumothorax might be added to the list of symptoms. The internal mammary artery, too, ran so close to the sternum, in the fourth and fifth interspaces, that sufficient distance between it and the side of the sternum hardly existed for the introduction of a knife, and he recommended that the vessel be cut down on and tied before the pericardium was incised.

Hypertrophy of the Tonsils and its Treatment.—In a lecture delivered in Edinburgh recently, Sir Morell Mackenzie said that

chronic tonsillitis or hypertrophy of the tonsils proceeds from two causes. A large number result from a low form of inflammation in childhood. When the tonsils obstruct the breathing, portions should be removed, also if the enlargement be associated with frequent attacks of inflammation. There is another condition which requires a similar proceeding: when the follicles of the tonsil are much enlarged the affection cannot be cured except by taking off a section. Dr. Mackenzie uses a tonsillotome which is a modification of Physick's. As a general rule, lightness of touch is the chief desideratum in operating, but in tonsillotomy it is the reverse. Heaviness of touch is the important thing. The tonsillotome must be pressed well over the tonsil, which is also to be projected into it by pressure with the thumb placed under the jaw. It is most important to take off enough. Dr. Mackenzie says hemorrhage in this operation is rare, but it has occurred; the carotid in some instances has had to be tied. He advises in hemorrhage the use of two parts of tannic acid and one part of gallic in a little water. The patient should be given two teaspoonsful, and should sip them slowly. The bleeding stops almost at once. The patient must be told to swallow the liquid, not gargle. Application with a brush will do no good. He should swallow the fluid slowly, and must on no account wash out his mouth with a gargle. The advantage of the addition of gallic acid is that it prevents the tannic acid from dissolving.—(*Condensed from Edinburgh Medical Journal*, May 1889.)

Operative Treatment of Hypertrophied Prostate.—Dr. F. S. Watson, in a well illustrated article (*Annals of Surgery*, Jan. 1889), discusses the various methods recommended for the relief of enlarged prostate. He divides the operations into *palliative* and *radical*, and his conclusions are as follows: (1) The mortality of the radical operations is certainly not higher than the palliative ones. (2) Of the palliative operations, that of suprapubic puncture with retained canula is by far the most dangerous. Its chief danger lies in the likelihood of urinary infiltration into the prevesical space. The perineal drainage is safer than suprapubic, but the chief objection to all palliative operations is that they do not remove or modify the pathological conditions. The

mortality of the radical methods, though less than half as great as that of the palliative ones, is still high; but it must be remembered that many more cases die from unskilful catheterization than from any or all the radical operations performed by competent surgeons. (3) Operative interference should be undertaken when there is inability to urinate spontaneously, frequent attacks of retention, difficult, very frequent (once every hour), or very painful catheterization, impossibility of catheterization, a purulent or hemorrhagic cystitis, and failure of palliative treatment. (4) As radical operations are not more dangerous than palliative ones, they are generally to be preferred; as, anatomically, two-thirds of all cases are operable from the perineum, and, clinically, the perineal operations are the safest, the surgeon should open the membranous urethra and explore; twice out of three times the operation may be completed by this means. In the other third of the cases, a long perineal distance or a long salient growth will make the supra-pubic method necessary. Dr. Watson reports two cases—one operated on by the supra-pubic method, which ended fatally, and one operated on by the perineal method, which proved successful.

Mr. Mayo Robson, in a paper entitled *Prostotectomy: a Sequel to the Operation of Suprapubic Lithotomy* (*British Medical Journal*, March 9th, 1889) advocates in cases of old men with stone and enlarged prostate that suprapubic cystotomy be performed so as to enable the surgeon to deal with both troubles at one sitting. He reports two cases successfully treated in this way. After the stone was removed the obstructing prostate was cut away with scissors. In one case, with the finger and forceps two masses the size of walnuts were removed from either side of the urethra. The masses were lobulate, and presented the character of adenoid tissue. In both cases the patients made a good recovery, being able to urinate through the natural passage.

Mr. Walter Whitehead (*Brit. Medical Journal*, April 13th, 1889), in a paper read before the Medical Society of London on *The Treatment of Confirmed Catheter Life by a Permanent Perineal Opening*, after briefly reviewing the more recent methods

of surgical procedure, stated that the operative part of his plan of treatment differed in no material respect from that of an ordinary median urethrotomy. The originality commenced with the after treatment, when, through the opening made in the membranous urethra, he retained an India-rubber tube until a sufficient time had elapsed for fistulous communication with the bladder to become cicatrized. After this the tube was worn no longer continuously, but the patient was instructed to regularly withdraw the urine through the fistula by means of a catheter. When cystitis coexisted with enlarged prostate, he recommended that advantage should be taken of each extraction of urine to give the bladder suitable medical irrigation before the withdrawal of the catheter. Several successful cases were narrated. The advantages claimed for this operation were that the bladder could at pleasure be completely relieved of its contents; it provided a permanent channel through which a perfect could be substituted for an imperfect system of washing out the bladder, and caused six inches of the most sensitive portion of the urethra to escape the irritation produced by passing the catheter in the ordinary manner. By the maintenance of a permanent opening the relapse which almost unavoidably occurs when the opening closes is avoided. The operation is performed by first passing a staff into a moderately distended bladder; a lithotomy knife with the edge turned upwards is plunged directly into the groove of the staff from a point an inch above the anus to a point a little in front of the apex of the prostate. Mr. Whitehead prefers to enlarge the skin incision as he withdraws the knife, leaving the external wound when finished about one inch in length and directed from the raphé to the centre of the space between the anus and the tuber ischii. This makes a clean cut wound which will not lodge urine.

A great number of operations have been devised for the relief of the difficulties arising from enlarged prostate, and none of them suit all cases or are completely satisfactory. Mr. R. Harrison's method of tunnelling the prostate has been already alluded to in this Retrospect. Mr. Harrison believes that by prolonged retention of a tube in the bladder through the perineum the

prostate undergoes diminution in size. Mr. McGill of Leeds advocates the suprapubic incision and removal of the diseased portion of the prostate through this. By this method he holds that the operator can always see the extent of the growth and remove the obstructing portion (*Lancet*, vol. ii, 1887, p. 1016). Mercier invented a special knife, which he employed through the urethra, the instrument being shaped like a lithotrite. Bottini of Italy used the galvano-catery with some success. Operations on the prostate are frequently attended with free hemorrhage, but can be readily arrested by pressure or the hot douche. Severe symptoms sometime follow, such as bronchitis, acute pleurisy, and Mr. Jessop of Leeds lost a patient from acute parotitis. These operations should only be performed when there is cystitis with a very irritable bladder, frequent hemorrhages from the prostate, or when the patient is unable himself to pass the catheter. In the *British Medical Journal*, April 27, 1889, Mr. A. Lane, of Guy's Hospital, reports a case in which he operated by the suprapubic method. The man was aged 72, suffered from bronchitis, and had sudden and complete obstruction, which was relieved by catheterization. This was followed by an excessive amount of hemorrhage, which much enfeebled an already broken down individual. The prostate was enormously enlarged. Operation was performed by suprapubic incision and a large mass of the middle lobe removed by a wire écraseur. In ten days the man died from exhaustion. Apparently the lungs were very emphysematous and the tubes full of sticky pus; other organs healthy. At the late meeting of the American Association of Physicians and Surgeons held in Washington, Dr. Hunter Maguire of Richmond, Va.., reported several cases operated on by the suprapubic method, where the skin opening was at a somewhat higher level than the opening in the bladder, thus making a valvular canal (a sort of artificial urethra), through which the patient could discharge his urine at will. We have not yet solved the problem how best to treat enlargement of the prostate.

Reviews and Notices of Books.

Physiological Notes on Primary Education and the Study of Language. By MARY PUTNAM JACOBI, M.D. New York and London: G. P. Putnam's Sons. 1889.

Physiological methods are rapidly revolutionizing psychology; and those engaged in directing education are slowly perceiving that the methods employed in the training of the mind must be based on the nature of the latter in order that they may be rational and so really successful. It is therefore pleasing to find that so busy a physician as Dr. Mary Putnam Jacobi can find time to discuss such subjects as those implied in the title of the little work which has recently emanated from her active brain. We have often asked ourselves the question why so few physicians interested themselves in education. Who should be better prepared to discuss some of its aspects than the physician of liberal culture? That one such has shown herself competent for the task becomes evident enough on reading this book before us. True to the physiological spirit, Dr. Jacobi has a most interesting chapter in her work devoted to "an *experiment* in primary education." Later she discusses the genesis of abstract conceptions and the study of language from a physiological as well as psychological standpoint.

We do not propose to criticise her views, for these must, till we get more light on the physiology of the brain and till more careful experiments have been made in education, expect great differences of opinion. Suffice it to say that this work is an attempt in the right direction and is timely in a high degree. We hope to see more such discussions by physicians who have not forgotten their physiology. W. M.

Surgical Bacteriology. By NICHOLAS SENN, M D., Ph.D., Professor of the Principles of Surgery and Surgical Pathology, Rush Medical College, Chicago, Ill. Philadelphia: Lea Brothers & Co. 1889.

So vast has the literature of bacteriology become that none but the specialist can afford the time to make acquaintance with

it first hand. That an endeavor should have been made by the present author to give the principal results in a concise form is fortunate for the profession. A very admirable and fairly complete account of the present *status* of the subject has been presented in a readable form within the very moderate compass of 260 pages. Thirteen plates illustrate, we might say embellish, the work, reproductions from Klebs' *Lehrbuch der Pathologischen Anatomie.* However, beautiful though they be, it must not be supposed that in all cases they are strictly true to nature. Brilliant colors are, we would suggest, after all, of questionable utility in a strictly truthful representation to those who are not experts at least. They bring subordinate points into relatively too bold relief.

The sources of the information supplied are fully acknowledged in the body of the text, thus affording one who wishes to pursue any topic further the clue to the details. With the progress of specialism such works as this must be of frequent production, if the rank and file of the profession are not to remain to a great extent in ignorance of what the vanguard in each department is accomplishing.

Selections.

CHARITY AND KNOWLEDGE.*

By Daniel C. Gilman,
President of the Johns Hopkins University.

Thirteen years ago, during the centennial celebrations of Independence Day, the University founded by Johns Hopkins began its work, and now, as we commemorate a completed century of constitutional life, the Hospital (gift of the same donor) throws open its doors. These buildings—complete as thought, time and wealth can make them—are henceforth consecrated to the ministry of mercy and the restoration of life. Science and charity, knowledge and pity, skill and sympathy are here installed in the service of mankind.

That large-minded citizen of Maryland, " who by noble gifts

* An address delivered at the opening of Johns Hopkins Hospital, Baltimore, May 7, 1889.

for the advancement of learning and the relief of suffering has won the gratitude of his city and his country," found two words adequate to his great ideas. "University" and "Hospital" were his chosen terms, and he linked them together by this significant phrase: "Bear constantly in mind that it is my wish and purpose that the Hospital shall ultimately form a part of the medical school of that University for which I have made ample provision by my will." How brief the phrase, how large the purpose? "Apples of gold in pictures of silver."

Like James Henry Roosevelt of New York, "a man upright in his aim, simple in his life, and sublime in his benefaction,"* whose hospital and dispensary give clinical instruction to the College of Physicians and Surgeons; like James Lenox of New York, whose munificence established a public library and gave birth to a hospital, Johns Hopkins, already honored as a patron of learning, will be henceforward remembered in the annals of charity and medicine. May we not almost say of him as Pindar said of Theron,

> —and I will swear
> That city none,—tho' she enroll,
> A century past, her radiant scroll,—
> Hath brought a mortal man to light
> Whose hand with larger bounty flows.
> The blessings to that man we owe
> Say who shall hope to count.†

We may form an idea of what our hospital is likely to be by the study of a like institution in London. About a century and a half before Johns Hopkins died, the days of Thomas Guy, the founder of Guy's Hospital, were ended. Like our benefactor, he had lived unmarried to the age of eighty years, and from humble beginnings had acquired a fortune, with which he provided for the establishment of a hospital. The amount of his gift was more than a million of dollars (£238,292). The beneficent influences of Guy's Hospital are now known in every part of the globe. It is doubtless safe to say that every one of us has shared, indirectly, in its benefits. The name of the great surgeon, Sir Astley Cooper, would alone give renown to the

* This phrase, like that referring to Johns Hopkins, is taken from a memorial tablet.

† Olympic, II, Cary's version.

Hospital to which he was attached;—Sir Astley Cooper, of whom it was said that from the period of his appointment to Guy's until the moment of his latest breath, he was everything and all to the suffering and afflicted; his name was a host; but his presence brought confidence and comfort.* Matthew Baillie's influence on modern pathology is well known. The famous discoveries of one of Cooper's pupils, Thomas Addison, need only an allusion. Hodgkins' disease perpetuates the remembrance of another of the discoverers of Guy's Hospital. The name of Richard Bright is celebrated throughout the medical world in connection with an investigation which qualified authorities have pronounced the most important contribution to medical science, made in the first half of the nineteenth century. Nearly fifty volumes of medical reports embody the observations and studies made in Guy's Hospital since 1836. Thousands of medical students have been trained within its walls; "their presence," says a competent observer, "has made the Hospital." Hundreds of thousands of patients have received relief from the treatment there afforded. In a single year five thousand in-door patients have been cared for and more than sixty thousand out-door patients have sought advice.

But we are planning for a future much longer than a century and a half; for a future as long as the past of St. Bartholomew's or St. Thomas's, which now, after many centuries, are more useful than ever.

By a curious coincidence, as I had reached this point in the preparation of my address, I received a volume from the Warden of St. Bartholomew's Hospital in London,† bearing an inscription in his well-known hand, so welcome and so apposite that I will read it. "To the library of the newest of Hospitals this account of the progress of medicine in one of the most ancient is given by Norman Moore, with the earnest hope that the Johns Hopkins Hospital may flourish at least as long as the Royal Hospital of St. Bartholomew in Smithfield, and prove no less useful to mankind,—on the opening day of the Johns Hopkins Hospital, 1889."

The history of St. Bartholomew's is the history of modern

* Letter of Dr. Roots, Memoir, 315. † Dr. Norman Moore.

medicine. It shows how modern professions
wards adapted to surgical and medical cas
veloped from a mediæval germ. "For mo
and fifty years the Hospital has flourished
and its Smithfield gateway, through whic
generation whose fathers saw William
London, has ever since been open to the s

In the pages of Dr. Moore you may pe
sician grew from a schoolman into a scient
the surgeon, who appeared on the scene
learning, grew from a handicraftsman to

You may read the names of Caius, Ber
Lawrence and Paget; you may learn tha
the originator of the undulatory theory
student, and you will come upon the stor
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of the blood, the illustrious Harvey.*

Time may efface the personality of o
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turies, and gratitude will cherish the mem
his great liberality, his wise and beneficer

Nor will posterity forget the Board u
this trust. His confidence (the world has
was not misplaced. During fifteen years
unpaid services of twelve of the most p
citizens of Baltimore, who have endeavor
and enlightened leadership of their Presi
to ascertain by correspondence, travel, ob
reflection, and by consultation with experts
nursing, architecture, education and ad
enlightened views of the civilized world w
struction and management of hospitals.
seventeen buildings from the income of th

* Dr. Moore calls attention to the fact that it was
encourage the study of anatomy which was the immedi
to his discovery, and also to a remark in one of Ha
passage of Aristotle which first suggested to him the id

increased the principal gift. They have constantly benefitted by the professional advice of the distinguished surgeon, Dr. Billings, to whose words you have just listened; other medical advisers have also given counsel; architects have embodied in good form the utmost requirements of suggestive medicine; engineers have brought to perfection elaborate apparatus for heating and ventilation; women who have had experience in the management of large institutions, and others who know what skilful nursing is—Florence Nightingale among the number,—have given their wise suggestions. Now we shall see the result of all this thought and care. The noise of the hammer has ceased; the healing ministry begins.

The exterior characteristics of this Hospital are well understood. It is a private foundation (independent of political or ecclesiastical support), a general hospital (in distinction from these institutions appropriated to special diseases); it has separate rooms for those who can pay for their treatment, in addition to the public wards; arrangements are made for the isolation of those who are suffering from infectious disorders; through the dispensary many will receive treatment who do not need to remain within the walls; the grounds are ample for temporary tents and barracks, if emergency requires them, and for permanent enlargement; a training school for nurses has been provided; there are attractive rooms for such young physicians as may be allowed the privilege of residence and study; suitable laboratories are well equipped for pathological investigations; there are apartments for a medical library and for the conference of medical societies; the proper theatre for clinical demonstrations and lectures has been built; careful records will be kept and published; important papers will from time to time be printed; and if the funds would permit, arrangements could be soon perfected for a School of Medicine and Surgery, by whose beneficent influence the good of this foundation might be indefinitely expanded.

One hundred years ago John Howard, *facile princeps* among modern philanthropists, published in a quarto volume, just before his death, the observations he had made upon the lazarettos of

Europe. That was the beginning of refor
refuges and hospitals. To this work he
Cicero, and I do not know a motto more
or one more fit to be inscribed around th
new building: *Quid tam porro regium,*
nificum, quam opem ferre supplicibus, e
*salutem, liberare periculis.**

Some of the influences of a hospital ar
casual observer; others are less obvious.
in a few short phrases, to remind you of
at this time the two foundations of Johns
be surprised if I often recur to the clos
the advancement of knowledge and the p

First, last and always, this hospital is
sick and wounded. Make the best of i
and sunshine, and provide the utmost cor
sicians, engage the best trained nurses,
pictures, bring fruit and flowers and book
the comforting influences of religion, yet
direful consciousness that this is the hom

Said Ugo Bassi, in his Sermon in the

> From any other ill,
> (Except it be remorse) can men
> By work,—the healing of divine
> To whom so hath the courage to
> But sickness holds the sick man
> No will can break or bend to ear

The names that have been given to th
are suggestive. Hospitality and hospi
bestowal of kindness to guests. The wo
degraded, pointed at first to the restoratic
la Charité, *la Pitié*, the Home of the
House of Mercy, bring to mind the kindl
care. St. John, St. Thomas, St. Barth
above all other apostles, are favorite pat
died in the Hospital of St. Sebastian.
Bethesda and Jerusalem have recalled

* Cicero, *De Oratore*, I., 8.

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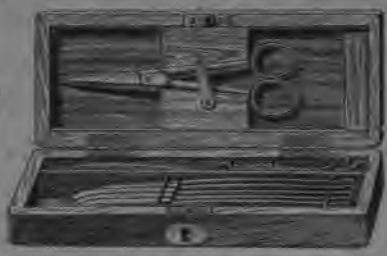
Surgical  Supply

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Great Physician was present. The name of Christ has been given to many a foundation. In other places the hospital shares with the temple the name of Hôtel-Dieu or House of God.*

By whatever name it may be called, this is a convent where sickness is the abbot. The rule of sympathy for the suffering must govern everybody with a strictness of discipline as rigid as the rules of the Benedictines or Carthusians. Those who daily walk these wards will be the warders of life and health, however high their station or however humble their service; and casual visitors cannot cross the threshold of the wards without pity for those who are disabled or without admiration and gratitude for those whose lives are spent in alleviating distress.

2. This Hospital will not only meet the daily calls of humanity, it will stand ready to render extraordinary services in those emergencies which not even the progress of municipal reform and preventive medicine can entirely ward off. A fire, an explosion, an accident on the rails or on the sea-shore, the fall of a platform or of a building poorly constructed, may at any moment tax the utmost resources of a great establishment. We have no fear of leprosy and the plague; we have almost ceased to dread the coming of the cholera; yellow fever we are hoping to thwart in its approaches to our northern seaports; vaccination, which was spoken of by Sir James Simpson "as the greatest thought ever broached in practical medicine," is a great prophylactic; but we are not certain that diphtheria and infectious fevers will not continue to be epidemic; nor can we always be sure that the boards of health in the city and State will succeed in protecting us, as well as they can, from the inroads of pestilence. Indeed it is well to inquire whether Baltimore is fortified as it should be against the hostile incursions of epidemic disease.

This Hospital therefore stands as a reserve force, a sort of store-house of energy, ready to serve the city if apprehension and disease spread their pall upon it.

Here let me say, in anticipation of the future and in memory of the past, that in all the records of bravery on land and sea,

* How unfortunate that in this country, where broader ideas should prevail, we have introduced the usage of sectarian names.

none are more noble than those of the medical profession. Free from all excitement, free from the hope of reward, free from any commands but those which are divine, they have in times of pestilence gone from bed to bed, firm, fearless, faithful, carrying the offerings of cheer, comfort and relief, and often of restoration to health and vigor. For them there is no repose in time of danger. The black wings of death hovering over a city do not deter them from duty ; and often it may be said of them, as Milton said of Abdiel, " faithful among the faithless," faithful only they.

Read the annals of modern pestilence, of cholera in New York, of fever and famine in Ireland, of yellow fever in the South. Everywhere it is the same story. The more direful the record, the more unflinching, the more self-forgetful, the more humane are the efforts of physicians in their exhaustive ministrations to the sick and dying.

3. While the offices of a hospital are bestowed without money and without price on those who are destitute, those who are able to pay for suitable attendance and for the domestic comforts to which they are accustomed may discover that they can here be better treated than in many private houses. The conditions of quiet are more easily secured ; suitable diet at unusual hours can be commanded ; medical attendance is within call at every moment of the day and night ; manifold appliances for relief are more readily obtained. More and more frequently, travellers, students, all whose homes are in hotels and boarding-houses, and even many who have good private homes, turn toward good hospitals when they see the need approaching for prolonged and special care. For the wants of such persons provision has been made in the wards here set apart for paying patients, male and female.

4. This Hospital would be a very narrow institution if it kept to itself its experience. It is the essence of quackery to deal in mysteries and nostrums ; it is the glory of medicine that it owns no patents and conceals no discoveries. On the contrary, the best hospitals of the world consider it one of their first duties—second only to the care of their patients—to record the cases

they have treated, the methods they have pursued, the results, whether favorable or unfavorable, which they have followed. Scientific studies in pathology and practical medicine must be printed. Special papers, often requiring costly illustrations, must be published upon extraordinary cases and upon new operations and modes of relief. It is thus that the science of medicine is advanced. Where secrecy reigns, carelessness and ignorance delight to hide ; skill loves the light.

5. It is impossible to have a hospital without its becoming a place for medical education. It is interesting to note that in the physician's oath, attributed to Hippocrates, the duty of imparting knowledge is explicitly enforced. Even the country doctor as he rides from village to village takes in his gig an observing pupil, like the squire to a knight-errant. Every great surgeon is watched with the closest attention by the younger physicians who assist him. Every mother is the pupil of the physician whom she calls upon to attend her suffering child. So, of course, a hospital, having upon its staff men of rare qualifications who are in daily consultation with their most skilful brethren, is, from the necessities of the case, a place for instruction. How systematic that instruction will be depends on circumstances that at the moment need not be presented. All that need now be is that hospitals the wide world over are the schools of medicine and surgery.

6. The training of nurses is another form of hospital activity, recently developed, never hence to be abandoned. To the sisterhoods of the Roman Catholic Church, to the Protestant Deaconesses of Kaiserswerth and the Bethanian at Berlin, and to many guilds in many lands, much credit is due for lessons they have taught the world as to the importance of training nurses. Elizabeth Fry was one of the first Englishwomen to propose such instruction. Florence Nightingale, by her influence in the Crimean war and by her subsequent writings, has borne a noble part in this work. So, too, have our own country-women. The civil war, full of sad recollections, has some bright stories, and among them none more inspiring than the labors of brave, self-sacrificing and intelligent women in the hospitals. Who that

has read "What we did at Gettysburg," or "Hospital Days," has forgotten their lessons? As a direct result of the war, Nurses' Schools have grown up in every part of this land. Our Hospital has such a department soon to be opened, where nurses will be trained, not only for their merciful offices within these walls, but for household engagements and for visiting among the poor.

7. A good hospital may readily become the rallying place of the medical profession who are resident in the city. Homer discovered that

> "Through mutual intercourse and mutual aid
> Great deeds are done and great discoveries made;
> The wise new wisdom on the wise bestow
> Whilst the lone thinker's thoughts come slight and slow."

One purpose of this central building is to afford opportunities for professional intercourse. Here are rooms set apart for the library that will presently be collected; here the medical journals will be taken in; here are the best appliances and instruments for the treatment of patients; here are rooms for private consultations and for public conferences; here are laboratories for physiological and pathological determinations; and it will not surprise me to hear that within a very short time medical associations are here brought together "for mutual intercourse and mutual aid" at the invitation of Dr. Osler, the physician-in-chief, who this day assumes his great responsibility with the hearty welcome of Baltimorians, and with the well-earned confidence of the profession throughout the entire land.

8. Reference must also be made to the lessons that this hospital has already given to the world before a single patient has been received. The vast amount of thought bestowed upon these buildings, not only in their general arrangements, but in thousands of details which promote their efficiency, has not failed to attract the attention of observers from every part of the globe. The letters which have been received during the last few days from the most distinguished surgeons and physicians abroad, and the presence of this large body of medical men from the distant cities of the United States are indications of this interest.

9. Finally, if this Hospital becomes the seat of knowledge in

all that pertains to the nature of disease, its treatment, its prevention and its cure, it will of necessity be a constant guide to the people of the city and the State in which it is placed; it will promote the general health of the inhabitants. There is an altar in one of the churches of Messina which bears an inscription to Æsculapius and Hygeia, the god of Medicine and the goddess of Health; and their statues are found together on the facade of Guy's Hospital. May they always be associated in Baltimore.

Is all this outlay wise? I might answer an inquirer in the words which Wordsworth employed in speaking of King's Chapel, one of the most costly structures in the University of Cambridge:

> "High heaven rejects the lore
> Of nicely calculated less or more,
> Tax not the royal saint with vain expense;
> With ill-matched aims, the architect who planned
> This glorious work of fine intelligence."

For in this Hospital, as in that church, are

> "Thoughts whose very sweetness yieldeth proof
> That they were born for immortality."

But I prefer to give a more specific and appropriate reply to those (if any such there be) who say, "I believe in everything that is practical, in whatever leads to the relief of suffering; but I am afraid of this talk about science. I would rather see a thousand beds for patients than any provision for medical education." Such reflections are to be heard with respect, for they are natural to minds unacquainted with the intimate relations which subsist between the progress of medical knowledge and the progress of medical art. Nevertheless it is true that those who have most carefully studied the conditions by which human life is perpetuated, human sufferings lessened, and human vigor increased, are well aware that every step forward in science leads to many forward steps in practice. May I endeavor to be a mediator between these two divergent views and bring a few illustrations from the doctor's shop to the attention of those who are practically interested in hospitals, but who have paid no attention to the steps, so slow, so difficult, so uncertain at first, but so sure at last, by which the healing art makes progress.

The late Dr. Austin Flint of New York, in an address pre-

pared near the close of his life, has pointed out with the wisdom of experience the probable "future of medicine." It would be presumptuous for me to attempt to do again what he has done so recently and so well. But on this day of promise, in view of all this expenditure, it is fitting that we should bring to mind some inspiring thoughts.

Let us first consider the benefits which have come to mankind from the opportunities which hospitals have afforded for the observation of disease. There is no one among us more competent to speak upon this subject than the pathologist of this hospital, Dr. Wm. H. Welch, who, years in advance of its opening, has been engaged as a professor of the University in the study of the nature and origin of disease. He has called my attention to these noteworthy points :—

"Those who have contributed the most to the advancement of practical medicine and surgery have accumulated their experience largely in hospital service. By the constant attendance of skilful physicians and of well-trained nurses in hospitals, precise observations can be made and the phenomena of disease and the influence of treatment determined under the most favorable conditions.

"Our present knowledge of the natural history of disease, of its diagnosis, prognosis and treatment are based to a very large extent upon experience derived from hospitals. Text-books, monographs and medical journals incorporate this experience and bring it to the knowledge of the medical profession. This is why intelligent physicians are always eager to secure the advantages of a hospital service."

The benefits which medicine has received from purely scientific investigations may be shown by so many examples that it is difficult to make a selection among them. Dr. Welch mentions these :

"Upon the foundation laid by Helmholtz's researches in physiological optics, and his discovery of the ophthalmoscope, the art and science of ophthalmology have developed into the most accurate department of clinical medicine.

"The investigations which received their impulse from Du-

Bois-Reymond in the difficult subject of animal electricity have rendered electricity available for diagnosis and treatment, and have advanced thereby our knowledge of nervous diseases.

"Of the many ways in which the work of the chemist has aided medicine may be cited, as one of its most recent contributions, the introduction into modern therapeutics of many useful remedies which are the products of synthetic chemistry. Doubtless this is a field which will be cultivated still further, and it would be rash to attempt to foretell what agents for the cure of disease and relief of suffering are still hidden in the chemist's laboratory.

"By the discovery of the specific germs causing various infectious diseases, surgical practice has been revolutionized. It has become possible to prevent the infection of wounds from the exterior, and thus to guard against a host of traumatic infections which rendered dangerous and futile so many surgical operations. Preventive medicine has taken its place among the exact sciences.

"Accurate knowledge of the causes of disease now forms a sure basis for intelligent therapeutics, and there is every reason to expect that the future will bring to light means to overcome the injurious agents which are now for the first time known."

But there is another illustration so marvellous that it may almost be called miraculous. The relations of advancing knowledge to advancing charity are brilliantly displayed by the history of methods for the relief of pain.

To put a stop to suffering is an instinct of human nature, distinguishing man from animals. The most scientific men and the most practical are agreed upon this, and have been so agreed for centuries. But anæsthesia, most welcome of all the angels of mercy, came down from heaven. When the older surgeons in this assembly were students, opium and alcohol were the imperfect anæsthetics most usually employed. Their use was restricted and unsatisfactory, if not dangerous. No one can tell what was suffered in places where gentle sleep now quiets apprehension and makes the patient unconscious of his woe. To this alleviation, we are so wonted that we accept it as the air we breathe. But if you would learn how man secured this boon, how many

efforts of scientific and of practical men were combined before the results were reached, recur to the history of four modern agencies, which are like "the gentle dew from heaven, which blesseth him that gives and him that takes." It is a chapter more wonderful than any romance of the Arabian Nights.

Let any one present who is skeptical in respect to the usefulness of science to the healing art keep this record in his mind. Let him reflect on the apprehensions that have been removed, not only from the patient but from his attendant friends; let him see how much easier, and therefore how much more certain, the task of the surgeon has been made; and above all, let him think of the hours of pain that have been absolutely annulled, and then let him divide the honors, if he can, which belong to science from those which belong to philanthropy: let him balance half a century of scientific relief with the previous practice of many thousand years; then let him tell us which is better.

From the past let us turn to the future. All the signs of the times point to a new era in the history of mankind. All the sciences are leading up to a better understanding of the laws of life, to a true anthropology, and the consequent improvement of the physical, mental and moral powers of man.

There are four or five directions toward which we may turn an expectant gaze, as in days gone by the merchants watched upon the house-tops for the return of the ships they had sent out to distant ports.

Preventive medicine promises to do more and more for mankind. As the germs of many specific disorders have been discovered, so the means of their destruction have been found out. If legislation and civil administration keep up with science, if knowledge is controlled by virtue and followed by temperance, the community will he freed from many of the foes which in former generations have slain their tens of thousands.

From the chemical laboratory new remedies, as well as simpler forms of old remedies, are to be constantly looked for. The synthetical processes which now receive so much attention have lately made important contributions to the pharmacopœia. It would surprise any one whose attention has not been directed

to this point to know how many claimants are awaiting judgment. Scores of substances, till lately unknown, as I have heard my colleague say, are awaiting the study of competent therapeutists.* Nobody can foretell what will come from their new contributions to materia medica, but one who watches the processes of discovery must feel certain that secrets hid from the beginning are, ere long, to be revealed, and that many of the substances already discovered have properties of the most serviceable character.

No one can say what will result from the attention that has been recently given to the study of psychical phenomena by the exact methods of science, but the outlook is hopeful. If we are as far as ever from elucidating the mysterious inter-relationship of the mind and the body, progress has certainly been made in the knowledge of the laws by which they act upon one another. The knowledge that has been acquired in respect to the functions of the brain and nervous system has already led to the treatment of many disorders and the relief of many diseases which a short time ago were beyond the reach of remedy. We are not without hope that in the physiological and psycho-physical laboratories already established here, important contributions will be made to science which will ultimately prove to be of value to medicine and the conduct of the body in health and disease.

Medical appliances and surgical instruments are greatly to be improved. The surgeon who has just returned from Europe, after visiting in the interest of this Hospital the most celebrated instrument makers, has informed me that the processes of manufacture are even now behind the devices and requirements of surgical science. The hands have not kept up with the brains. It is not possible to buy ready made the instruments which an accomplished surgeon now requires. In the future we are to look for progress in the applications of electricity and magnetism to the treatment of disease as well as to its diagnosis.

Chemistry by its synthetic methods is producing new remedies, which experimental therapeutists proceed to test and pharmacy then appropriates. The laws of light, heat, electricity and magnetism are found in close relationship to the problems of relief

* Professor Remsen.

and cure. The laws of temperature and climate have their services to render. Even the influence of barometrical pressure upon surgical operations begins to be noticed. The study of the nervous system is sure, at no distant day, to make important contributions to the welfare of man. Psychology is waiting for the results. Experimental physiology is doing its part. Pathology, a term as old as Hippocrates, has become a new science within the last few years. The laws of descent have but just begun to assume a scientific form. Preventive medicine is almost a new conception. The morality of personal hygiene is a new department of ethics. Biology, after having received the same critical reception with which anatomy, astronomy, geology and chronology were greeted, as they approached maturity, will yet be honored as leading to the highest and noblest conceptions of humanity. Anthropology, the knowledge of man in his relations to the universe in which he is placed, will prove to be the culmination of finite knowledge.

So all along the line, in the laboratories of the University and in the wards of the Hospital, knowledge is leading up to the welfare of man. The days of the coming man may not always reach the full allotment to which Chevreul has just attained, but perhaps to die at seventy will be to die in youth, and to reach the age of eighty or ninety in health and vigor will be the rule and not the exception. Nor is length of days our only hope. The disappearance of epidemics, fewer days of confinement in sickness, fewer "minor ailments," a decrease of infantile mortality, greater powers of resistance to the evils of certain occupations, and comparative immunity from many infirmities which are now common, artificial reinforcements and replacements of bodily defects, simpler and surer means of diagnosis, and detection of the nature, origin and history of specific affections, and, finally, the assurance of euthanasia. These, as it seems to a layman, are reasonable expectations which the nineteenth century holds out to the twentieth. Can any outlay be too great if humanity be thus benefited?

To the attainment of these noble aims, "the relief of suffering and the advancement of knowledge," the foundations of Johns

Hopkins are forever set apart. On the one hand stands the University, where education in the liberal arts and sciences is provided, and where research is liberally encouraged; on the other hand stands the Hospital, where all that art and science can contribute to the relief of sickness and pain is bountifully provided. Is there anything wanting? Yes,—there is still a great want to be supplied—an arch to rest upon these pillars. An Institute of Medicine and Surgery, a College of Physicians and Surgeons, a Medical School,—the office of which shall be to promote the training of young physicians, and the encouragement of medical science is imperatively needed. Is it too much to say that there is not such an opportunity on the face of the globe for another Peabody or another Hopkins to benefit his fellow-men?

The University needs all it has, and more, to carry on the non-professional courses to which its funds are appropriated. The Hospital, with all its readiness to co-operate in the advancement of knowledge, will, after all, remain—as I have said before, and cannot say with too much emphasis—the home of the sick, the feeble, the injured and the dying. It is the house of mercy, not the hall of philosophy. But in close alliance with both these foundations there is a place for a school of medicine, which may bear its founder's name, and may render services as significant and memorable as those of Salerno and Bologna, at the beginning of the modern era, as those of Leyden and Edinburgh, where the earliest American physicians received their education; or those of Berlin and Vienna, to which so many students of this decade resort.

This grateful city should no longer delay placing upon one of the squares, near the monument of Washington, the figure of Johns Hopkins, with such designs as an artist, and an artist only, could devise, to typify the great ideas which underlie his gifts, "the advancement of knowledge and the relief of suffering."

Then might some friend of this Hospital place beneath this dome a copy of Thorwaldsen's Christus Consolator, with the outstretched hands of mercy, to remind each passer-by—the physician and the nurse as they pursue their ministry of relief, the

student as he begins his daily task, and the sufferer from injury or disease—that over all this institution rests the perpetual benediction of Christian charity, the constant spirit of "good-will to man."

Upon one hill of Baltimore rises a temple, "whose guardian crest, the silent cross," is an emblem of the Christian faith; upon another, a lofty column reminds us of the patriot's hope; upon a third, the Hôtel-Dieu is placed—the house of charity. Significant triad! "Here abideth Faith, Hope and Charity, but the greatest of these is Charity."—*Maryland Med. Jour.*

Schuchardt on Tubercular Fistula of the Anus.* (G. D'Arcy Adams, M.D.)—Study of the history of these cases shows that the old observers had noticed how often fistula was connected with consumption of the lungs; but it was reserved to the present day to clear up many things not understood as to their relationship, and to prove that the majority of fistulæ in ano are due to local tuberculosis. To Professor Volkmann belongs the credit of having first shown the tubercular nature of these fistulæ, and in the Klinik at Halle in all these cases the presence of tubercle-bacilli is shown by microscopical examination or by inoculation into the anterior eye chambers of rabbits. Very interesting and demonstrative of the specific character of the disease is the well-known case of Volkmann, in which the secretion from the fistula infected the skin of the anus, giving rise to a *lupus foliativus* (and at the same time an additional proof that lupus is a tuberculosis of the skin). In this case the inguinal glands also became tubercular. One must, from analogy of cancer of the rectum, which only leads to infection of the inguinal glands by encroachment of the carcinoma on the skin of the anus, assume that the secondary lupus has occasioned the tubercular bubo. As to the pathogenesis of tubercular fistulæ, very small lesions of the mucous membrane afford the point of entrance to the tubercular virus, and it is characteristic that these small lesions of the gut must be present so that the virus imported in food or in the swallowed saliva may

* Volkm. Sammlg. klin. Vortr., No. 296, and Deutsche med. Zeitung, No. 86, 1888.

find its way into the loose peri-proctal connective tissue. Large ulcerations, such as only occur in intestinal tuberculosis in the rectum, only very seldom give rise to tubercular peri-proctitis. Only in isolated cases, in which no opening in the mucous membrane can be found, is a primary connective-tissue tuberculosis to be thought of. The rectum, like the cæcum and vermiform appendix, is very liable to acute inflammation and to chronic ulceration from stagnation, etc., of the bowel contents, and, to complete the analogy, one sees perityphlitic fistulæ, which likewise have the character of tubercular abscesses. Coming to the treatment of tubercular rectal fistulæ, the propriety of their operative removal has long been proved. The old idea that the fistula represented a beneficial, natural, derivative action, which hindered the development of the lung disease, and that the cure of the fistula caused the development of the phthisis, was proved false when etiological investigation showed that both diseases were due to a common cause. We have long recognized the necessity of removing a local tuberculosis wherever it is possible, and the rule holds good in these cases. The disease must be removed as radically as possible, by incision and clearing out of all the recesses of the often tortuous and far-spreading fistulous canal. Whether the treatment recommended by American surgeons of diminution of the wound by sutures or the ordinarily employed iodoform plugging of the wound is to be preferred, Schuchardt thinks questionable. The last affords greater security against relapses. As for the rest, he adds, that after radical removal of all diseased tissue, exact suture makes healing by first intention possible, and that, certainly, for simple non-tubercular fistula, the new method certainly deserves the preference. —*London Medical Recorder*, March 20th, 1889.

Value of Casts and of Renal Inadequacy in the Diagnosis and Prognosis of Kidney Disease. (By E. G. Janeway, M.D.)—*Casts*, whilst they are amongst the surest signs of disease of the kidney, may be misleading either by their presence or absence. The question is raised as to the condition of the kidney by cer-

tain symptoms—nervous, of general malaise, or by reason of the presence of a neuro-retinitis, and in consequence the urine is submitted to microscopic examination. If, under these circumstances, a few hyaline casts are found, are we to consider the cerebral disease, etc., as associated with, or dependent upon, a confirmed kidney disease? The writer has met with illustrations which proved that such association of a few hyaline casts was a temporary condition, did not recur, and after the lapse of years the patient's state warrants the assertion that the few hyaline casts were not indicative of a confirmed or incipient nephritis. Again, a few hyaline casts may be found as the result of examination for life insurance, and the same question is raised. The company's examiners are right to reject such a case as doubtful. Yet it is well to make inquiry as regards the circumstances which have attended their production. The following will illustrate: A gentleman of good physique, fond of sparring, applied for life insurance. His urine examined was found to contain casts. Becoming alarmed, he applied to me, and the examinations of samples of the night and morning urine failed to show casts, except the soft mucous variety, twice after repeated examinations. Questioning him as regards the time of day at which his urine was examined, and the conditions preceding, it was learned that he was in the habit of boxing violently for half an hour, and perspiring markedly, take an alcoholic sponge bath. Urine obtained under similar conditions revealed hyaline casts. After the lapse of four years his urine is of normal character, and had no casts on an examination made this spring. Such a case confirms what experimentation has taught, that hyaline casts may appear in the urine after very slight and temporary changes, quickly form, and as quickly disappear. Again, the absence of casts on single, it may be on repeated examinations, does not assure us that the kidneys are in perfect condition. It is true that in these cases too often not a large enough amount of urine is allowed to precipitate, and enough pains have not been taken to secure preserved settlings. It is especially true of those hospitals in which ducts made of glazed ware are used, whose interior is foul, and causes the urine to decompose rapidly. Mention should be made

of the soft mucous casts, called cylindroids by some, which are at times found in the urine of patients free from kidney disease, particularly where the urine is of high specific gravity, and charged with uric acid or oxalate of lime. All these things considered, are there no sure indications afforded by casts? We can conclude that if urine contains rich epithelial casts there exists an acute nephritis, rarely an acute exacerbation in a chronic case. Blood casts speak for an acute process, whether an acute nephritis, or hemorrhage in the course of an older process in the chronic nephritis of large type. Waxy casts, while they denote a change in the kidney, and hence have a more marked significance than the hyaline and the mucous, may occur in the different forms of kidney disease (Bright's). Present in number, and on different occasions according to the coincidences, they would point toward either the acute, particularly in its latter stages, or the chronic large kidney, or to a combination of waxy with the parenchymatous nephritis. Granular casts, coarse and fine, will not be present, or only occasionally in the small kidney, and absent from the urine of the waxy kidney, unless inflammatory changes are occurring in it. The writer has seen more mistakes made as regards granular casts than of any other variety, by supposing their presence, owing to a confusion with bacterial masses in partially decomposing urine, and this is particularly true of urine containing pavement epithelia turned on its side. The greatest difficulty will be found in the attempt to discriminate the different varieties of renal disease from single examinations of the urine by the microscope. Fatty casts, or casts having fatty particles in them, or in the cells connected with them, whilst denoting a degeneration as regards the example seen, and inferentially of more, do not of necessity indicate that the kidney is in an advanced state of fatty degeneration. If such casts are abundant and repeated, then such inference is correct. The minute crystalline aggregations of uric acid, and more rarely of oxalate of lime, are at times taken for granular casts, and, if a few cylindroids coexist, the kidneys are inferred to be diseased. Again, the number of casts in a single sample of urine cannot be regarded as giving a correct index to

the condition of the kidneys. Either a markedly diminished secretion may prevent their appearance, though many exist in the tubes, or, on the other hand, owing to a recent re-establishment of partly suppressed secretion, a large number may make their appearance. Hence better conclusions can be reached in each of these conditions by several subsequent examinations.

Renal Inadequacy.—Incompetency of the kidney is perhaps as, if not more, important than the preceding events in estimating the extent of lesion and the prognosis. It cannot, however, particularly in the chronic, nor even in the acute forms, be considered by itself. The condition of the heart forms a marked factor. Moreover, this state may be simulated by other conditions than those of Bright's disease. Hysterical anuria illustrates this, as well as the effects of occlusion of the ureter. In estimating its importance in a given case, due regard should be had (1) to the weight of the individual, (2) to the diet, (3) to the effect of profuse discharges, (4) to the effect of rapid absorption of dropsical effusions, and (5) to the nutritive activity of the individual. The sudden entrance of almost complete anuria can be borne for a longer time without severe symptoms than in those cases in which a gradually increasing deficiency has had place. The cases of removal of a single kidney forcibly illustrate this. The specific gravity in connection with quantity of urine per diem forms a good measure of renal competency. The relation is not absolute between the urea and the water. The kidney may be much more incompetent for one than for the other. In acute cases, in which the glomeruli are much more affected than the tubes, or perhaps solely affected, whilst the urine is remarkably reduced in quantity, the specific gravity may be abnormally high without abnormal ingredients, or other than blood, albumen and hyaline casts. After the former of these events we may not even be certain that an inflammation existed, providing recovery takes place. The writer witnessed one case after measles —a child of seven years passed a quart of urine only during a week, of specific gravity 1030. The urine contained no albumen, blood nor casts during or subsequent to this time. The same might be said of the suppression of urine in cholera. In relation

to the diagnosis of the different forms of Bright's disease by the inadequacy of the kidney to perform its function properly many useful rules are laid down in the books; these not thoroughly agreeing, however, because of the discrepancy which prevails about the position of some kidneys, and in proportion as regard is had to the whole course of the disease, or to some particular more typical phase. Liabilities to error exist moreover in the mixed types of kidney trouble as in the small waxy—the combination of waxy with parenchymatous nephritis. In the typical condition a small quantity of urine is characteristic of acute nephritis, but the same may be met with at the terminal period of the contracted kidney, or during the course of the large kidney. So, again, during convalescence from acute nephritis, the quantity of urine may be large, and the specific gravity low, producing a simulation of the small kidney as regards that feature. Hence an absolute diagnosis of the type of kidney trouble could not be had by a consideration of the sufficiency of the kidney as demonstrated by the amount of urine and the urea it holds. But much can be done in effecting a prognosis, particularly in the chronic form. Here, as the end approaches, either in the large kidney, because of the amount of the disease or because of an acute exacerbation, or, again, as in the contracted kidney, because of the failure of the heart, the growing insufficiency shows itself by the lessened quantity of water, the failure of elevation of specific gravity correspondingly, the failure of urea excretion. In the small kidney in such cases, in many instances, better prognostic results may be gained from the heart's capability than from the urine.—*Transactions Association of American Physicians; Pacific Medical Journal.*

Antipyrin in Nasal Hemorrhages and in Intra-Nasal Disease.—The hemostatic properties of antipyrin reported by Hénoque in 1884 have been recently reaffirmed (*Arch. de Lar.*, April, 1888). He considers that the drug produces a constriction of the vessels and of the tissues at the same time that it produces coagulation of the blood. Among the practical hæmostatic applications indicated are

hæmostases of the nasal structures. In epistaxis the antipyrin may be used in powder, in solution, incorporated into gauze, or in ointment. It may be insufflated, and then be covered with wadding or other dressing. During the course of operations in the nose the parts can be bathed with a five per cent. solution. Cotton wadding can be sterilized and then dipped into a concentrated solution and allowed to dry. Hénocque thinks there is antiseptic action in addition to the hæmostatic, and perhaps even an action favorable to cicatrization.

Hinkel (*New York Medical Journal*, Oct. 30, 1888) reports only questionable success from weak solutions of antipyrin in several cases of trifling bleeding following operations in the nose, but in later experience with a four per cent. solution found decided hæmostatic effect, though not superior to that of cocaine. He finds that it possesses, to a certain extent, similar retractive effect on the turbinated tissue to that of cocaine. Sixteen grains to the ounce of water, with a few minims of glycerine, was as strong as could be readily borne, and was sufficient for the purpose. He noticed no blanching and no anæsthesia; but noted a sedative action utilizable in certain cases of sneezing, lachrymation, etc., in coryza, and in hay fever. Antipyrin presented an advantage over cocaine in avoiding numbness and dryness of the parts and over-stimulation of the nervous system. It causes considerable smarting, and is unequal to the relief of severe inflammation or extreme occlusion of the nares. Combined with cocaine it increases the topical action of the latter, so that cocaine can be used in a weaker solution, say from one-half to one-fourth per cent. solution.—*Amer. Jour. Med. Sciences.*

THE

Montreal Medical Journal.

VOL. XVII. JUNE, 1889. No. 12.

INFECTION OF SCARLET FEVER.

Dr. John Harley* enumerates views on the subject of the infection of scarlet fever which are not likely to be accepted generally by the profession. Scarlet fever, he says, is regarded on all hands as pre-eminently contagious, but although he has been endeavoring all his professional life to obtain proof of it, as yet he has failed to find it, but has acquired some evidence to the contrary. He has seen whole families affected, falling ill one after another, and has witnessed, as he supposed, the operation of an endemic cause. "I have never known imported cases propagate the disease, and I have never witnessed its spread, under the most favorable circumstances, among the convalescents in the fever hospital. During my connexion with the London Fever Hospital I did not contract scarlet fever, though I had never suffered from it; but eight years after my connexion with that institution ceased, I experienced a sharp attack at a time when I had not to my knowledge been in contact with any case of the disease. I am convinced that a chill was the sole cause of my attack, and I adduce it as an instance both of the spontaneous origin of scarlet fever and of its inability to spread, for neither my guests nor any member of my family caught the disease. Scarlet fever thus resembles common catarrh, springing up in households here and there, affecting some members simultaneously and others after intervals." This is a new and somewhat dangerous doctrine, and the statement of his own case will not go far to prove the truth of the non-contagiousness of

* The Lumleian Lectures on Enteric Fever, delivered at the Royal College of Physicians, April 1889.

scarlet fever. And so with enteric fever. Dr. Harley boldly states his belief that its development is but a mere accident in the progress of those severe congestive strains of the internal organs which always happen to those who are imperfectly protected against diurnal variations of temperature as in warfare. It is the object of Dr. Harley to prove that the diseases we have always regarded as being of specific origin depend merely upon external influences and not upon contagion.

A REMARKABLE EPIDEMIC OF PNEUMONIA.

In the *Maritime Medical News* for May there is an account of an epidemic of pneumonia in Prince Edward Island. During the months of February and March no less than 546 cases occurred in the practice of twenty-six practitioners, and at the date of the report the disease was still very prevalent. As there are over fifty practitioners in the Island, it is computed that the total number of cases is fully upwards of one thousand. As the population of the Island does not exceed 150,000, the number attacked is very great. It appears that in the majority of cases the pneumonia was attended by acute bronchial catarrh. The catarrhal complications, which in some cases also involved the larynx and middle ear, were more frequent in children and the aged. In the 546 cases reported there were only forty deaths, a decidedly low mortality. It is interesting to note, in connection with the cause of this epidemic, that the past winter was characterized by an abnormally high temperature throughout, together with much rain.

In the same number of the *Maritime Medical News* there is a very instructive editorial on the epidemic.

CLINICAL EXAMINATIONS.

At the recent meeting of the General Medical Council of Great Britain a motion was introduced by Dr. Glover urging on the examining bodies the necessity of requiring more proof from students of an acquaintance with common diseases and their treatment. From the report of the examination visitors, Dr.

Glover was much struck with the very narrow, monotonous and, withal, chronic, incurable and unhopeful group of cases constituting the material for examination, giving little idea of the variety and curability of cases in common practice making up the day's work of the ordinary practitioner. At two examinations at the Conjoint Board of England there were 190 cases, of which one-third were cardiac and fourteen were cases of phthisis. All were chronic, and were more interesting pathologically than therapeutically. The following groups of cases had no place in any of the clinical examinations: (1) Infectious diseases of all sorts; (2) infantile diseases; (3) all sorts of ordinary cases; (4) insanity; (5) puerperal diseases; (6) eye diseases. Attention was also drawn to the lamentable ignorance of many candidates in the art of prescribing, the great majority of the examining bodies not demanding any knowledge on this subject.

To remedy these defects, among other things is suggested the necessity of the curtailment of the systematic lectures. Both the teaching and examining bodies in Canada would do well to take into serious consideration the points here referred to.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The Journal of the American Medical Association has issued an extra edition of 75,000 copies. This number is especially interesting, as it contains a tabulated statement of the various medical colleges in the United States and Canada, the date of their organization, and the requirements for entrance and graduation. As is well known, most of the colleges have no matriculation examination whatever, a certificate of good moral character being generally considered enough evidence of a man's ability to enter into the most difficult of all studies.

In the same number there is an illustrative description of Newport, the place of the coming meeting of the Association. The programme for the meeting is very full, and everything points to a highly successful gathering.

CANADIAN MEDICAL ASSOCIATION.

The Grand Trunk Railway offers the usual reduced rates from all points on their line to all practitioners who desire to attend the coming meeting of the Canadian Medical Association at Banff.

The following is the form of certificate to be issued by the C.P.R. for the Banff meeting. Members intending to take part in the meeting are specially requested to make application in writing as early as possible to the General Secretary, Dr. Bell, 53 Union Avenue, Montreal, *stating whether they come alone or are accompanied by ladies or patients.* This is absolutely necessary in order that the requisite number of tickets may be issued in time by the railway company:—

TWENTY-SECOND ANNUAL MEETING

CANADIAN MEDICAL ASSOCIATION

BANFF HOT SPRINGS,

ON THE CANADIAN PACIFIC RAILWAY,

AUGUST 12TH, 13TH AND 14TH, 1889.

This is to Certify that the bearer .....
is a delegate to above and accompanied by .....

.....

and are entitled to .....tickets at the Special Rates to Banff Hot Springs and Return, granted by the Canadian and Grand Trunk Railways.

.....

General Secretary.

MONTREAL, ...1889.

NOTE.—Departure should be arranged so as to connect with train leaving Montreal or Toronto on the evening of 6th August. Delegates from west of Kingston, going by way of Toronto, and from Kingston, Sharbot Lake and East by way of Montreal or Carleton Junction.

Tickets issued on these certificates will be good only for going trip between 5th and 13th August inclusive, by which latter date the journey to Banff must be completed.

THE ROYAL VICTORIA HOSPITAL.

We are pleased to learn that the building of the Royal Victoria Hospital of Montreal has at last been commenced. The estimated cost is upwards of half a million dollars. The appoint-

ments for the comfort of patients and their treatment presents several new features. Very special attention has been directed by the architect to embody into the clinical department of the hospital all those modern improvements which tend so much to promote the efficiency of teaching.

APPOINTMENTS IN THE MEDICAL FACULTY OF McGILL UNIVERSITY.

Dr. Geo. Ross has been appointed Professor of the Practice of Medicine, and Richard L. MacDonnell Professor of Clinical Medicine, in McGill University.

POLICE MEASURES AGAINST CONSUMPTION.—The studies which Dr. George Cornet has made, under Dr. Koch's guidance, on the propagation of tubercle bacilli, have induced the president of the Berlin police to issue certain regulations for hospitals. Dr. Cornet has proved that the spread of consumption is largely due to the circumstance that the sputum of consumptive patients, which always contains tubercle bacilli, floats about in the air after being dried and pulverized, and is inhaled by healthy people. The president of police has therefore ordered that consumptive patients in hospitals shall be kept in special wards and forbidden to expectorate on the floor or into their handkerchiefs, but only into vessels partly filled with water; that the sputa shall be removed in a wet condition; and that their clothes and linen shall be thoroughly boiled and disinfected. These regulations are to be enforced not only in hospitals, but also wherever consumptive patients live.—(*Berlin Correspondent of London Lancet.*)

A CANADIAN AUTHOR.—"Mes Expériences avec les Esprits" is the work of M. Henri Lacroix, a French-Canadian, and is published in Paris. We are unable at this date to say whether the author has been crowned by the Academy or not, most probably he has. The reviewer (in *Galignani's Messenger*) states that M. Lacroix was born in 1826, in the State of Michigan, of French-Canadian parentage, and his experiences of spirit

manifestations began when he was only 16 years of age, and have continued with increasing intensity down to the present time. He was married at Montreal in 1850, and had fifteen children, of whom twelve died within eighteen months of their birth. According to his statement, he has not only been in constant communication with them ever since, but seen them grow up to be young men and women, exactly as they would have done had they remained upon earth, and in 1887 their portraits were revealed to him. He made sketches of them, under their control, and the book contains the portraits of the entire collection. It appears that in the spirit world boys play at marbles and other games, while young men and maidens fall in love, and contract and break off engagements ; in short, their actions, sentiments and passions differ in no appreciable respect from those of mortals here below. M. Lacroix narrates the sayings and doings of his offspring, and of all sorts and conditions of spirits, with the profoundest conviction, and with abundance of circumstantial detail. He apparently expects from his readers the most implicit faith in what he records as facts, but what will to an overwhelming majority of them be regarded as hallucinations. One thing is certain : the wildest flights of imagination can scarcely devise incidents more extraordinary than those which he describes, apparently without the slightest suspicion that they are other than every day occurrences. Those who wish to learn to what an extent the human mind can be influenced by hallucination will find in this work abundant material for an instructive study.

Medical Items.

—Dr. Howard Kelly of Philadelphia has been elected to the chair of Obstetrics in Johns Hopkins University.

—The American Association for the Advancement of Science will meet in Toronto on the 27th of August next.

—The fortieth annual meeting of the American Medical Association will be held in Newport, Rhode Island, on June 25th and three following days.

—Dr. Owen Rees, the distinguished physician and medical chemist, has just died at the advanced age of 84.

—The Episcopal Hospital of Philadelphia has been offered, by the family of the late George Harrison, the sum of $200,000 to build and maintain a wing for incurables.

—Dr. Edward Liveing has been appointed to the important office of Registrar of the Royal College of Physicians. He is the author of a well known work on Megrim.

—The *Dominion Dental Journal* has made its first appearance. Mr. Beers, who is the editor-in-chief, will, we feel confident, through his energy and ability, make it a pronounced success.

—The death of Professor Breisky of Vienna is announced. Since his appointment to the chair of Midwifery in the University of Vienna, three years ago, he has been unable to do any work.

—A distinguished professor in the University of Aberdeen has been taken to task for making a remark which was understood to imply that, as compared with pathology, materia medica was not of much importance.

—A grand banquet was given Professor Billroth of Vienna on the occasion of his 60th birthday. In returning thanks he touched upon the past and probable future of surgery. He considers that the treatment of tuberculosis from the chemical point of view will be the great problem of the near future.

—The fifty-seventh annual meeting of the British Medical Association will be held at Leeds, on the 13th, 14th, 15th and 16th of August, under the presidency of Mr. Wheelhouse of Leeds. Dr. J. Hughlings Jackson will deliver the address on Medicine, and Mr. T. Pridgin Teale that on Surgery.

—Dr. Herbert Tibbits of London has recovered from Mac-Millan & Co., publishers, the sum of one farthing, for an alleged libel. The claim stated that the "defendants were publishers of a periodical called *Nature*, and in a recent number falsely

and maliciously printed, concerning the plaintiff in his profession as a medical man, in the form of a review of his book, a libel to the effect that the plaintff, whilst professing to teach massage, had not mastered the first principles of the treatment; that it was seldom a medical book of such inferior quality had been issued from the press; and that the fact that the book had found purchasers was a striking proof how a catching title and an attractive exterior could still mislead the public."

—MM. Babès and Kalindero, at a recent meeting of the Académie de Médecine, presented a note on certain changes they discovered in the cord and posterior nerve-roots in a fatal case of Addison's disease. The changes consisted in swelling and interruption of the axis cylinder and multiplication of the cellular elements, chiefly in the lower part of the dorsal cord.

A Generous Gift.—The well-known surgeon, Mr. Cadge, has arranged that after the death of himself and of his wife, his private fortune of £10,000 shall revert to the Norfolk and Norwich Hospital, with which he has long been connected.

New York Post-Graduate Medical School.—The summer term of this institution opens on June 17th, 1889. The fees for this session are one-half those of the winter term, and yet the advantages in the Dispensary of the School and in many of the Hospitals of the city are quite as good as during the winter.

A Question of Precedence.—At the Royal College of Physicians, Sir Andrew Clark, on assuming a second term of office as president, stated that he had been requested to sign his name in his capacity as president to a document which was also signed by the President of the Royal College of Surgeons and the President of the General Medical Council. He maintained that the College of Physicians should take precedence of those two bodies, and the matter being referred to the Herald's College he gained his point. The letter from the Garter King at Arms was entered upon the minutes.

The Present Aspect of the Iodoform Question.—The triumphant march of the germ theory received some four years ago an unexpected and, it seemed at that time, a final check.

Just when it seemed to have been surely determined that unhealthy action in wounds was caused directly by the entrance of disease germs from without, and that the exclusion and destruction of germs would secure rapid and normal repair, the startling discovery was made that iodoform, which was widely used as an antiseptic, and which evidently promoted greatly the healthfulness and healing of wounds, was not a germicide, and might in fact be the vehicle in which germs were carried into the wound. In an article in the *Annals of Surgery*, March 1889, Dr. Van Arsdale discusses the matter fully, showing what interesting discoveries have resulted from the refusal of iodoform to fit into the old theory, and giving the literature of the subject. Investigation has proved that disease germs are aided in their septic work by certain chemical substances called ptomaines, which are formed in the tissues as a result of their action upon the tissues. Iodoform, while it does not destroy nor seriously hinder the germs, does destroy the ptomaines. Thus, we may suppose, the tissues, not being enfeebled by the action of the ptomaines, are enfeebled either to destroy the germs or to resist their malign assaults. Clinically, certain facts have been developed which are of practical value, whatever may be the fate of the scientific theories involved. In dressing wounds the surgeon must hereafter use two different sets of antiseptics He must first seek, as far as possible, to exclude disease germs or to render them inactive, and for this purpose he must use germicides, such as corrosive sublimate. He must next endeavor, by applying agents like iodoform, to prevent the formation of poisonous chemical substances in the wound, or to decompose them and render them inactive if once they have been formed. These latter agents, if they, like iodoform, contain disease germs, must be disinfected before they are applied. Iodoform should be washed in corrosive sublimate solution. It should be brought into as intimate contact as possible with the surface of the wound, and after its application the wound should be covered with germicide and protective dressings.—*Medical Record.*

How Doctors are Viewed by a Good-natured Literary Man.—The doctor who could not laugh and make me laugh I

should put down for a half-educated man. It is one of the duties of the profession to hunt for the materials of a joke on every corner. Most of them have so esteemed it. Garthe, Rabelais, Abernethy and a hundred or so more too near to be named, what genial, liver-shaking, heart-quickening, wit awakening worthies they were and are! To the son who loves her best, Nature reveals most her tricks of workmanship. He knows there is a prize in every package of commonplace and sadness, and he can find it—not only the bit of fun shining to the eye of the *connoisseur* like an unset jewel, but the eccentricity, the resemblance, the revelation, countless signs and token of the evanescent, amusing, pathetic creature we call the human. Heartless, grasping, irreverent? The deepest compassion for human ills, the broadest generosity to human needs, the highest respect for all that is strong and pure and holy in human lives, I have seen in the men who come closest to the mystery of life and the mystery of death, who read the naked heart when it is too weak or too sorrowful to hide its nakedness, who know our worst, and are most of them wise enough to strike the balance. If they are cynics, it is we who have made them so. We are the books out of which they learn their lessons.—*Mr. A. B. Ward in Scribner's Magazine; Southern Practitioner.*

Ingluvin in the Vomiting of Pregnancy.—Dr. Popp (*Pester med. Presse*, No. 40, 1888) reports having achieved considerable success with Ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted the entire resources of the pharmacopœia, he administered three times daily, one-half hour before meal-time, eight grains of Ingluvin, and directly afterward two tablespoonfuls of one per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and a cure effected after the treatment had been continued for three weeks.—*Deutche med. Wochenschrift*, Jan. 17, 1889.

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Vol. XVII. No. 12.

THE

MONTREAL MEDICAL JOURNAL.

A REVIEW OF MEDICINE, SURGERY AND OBSTETRICS,
AND CHRONICLE OF HOSPITAL PRACTICE.

EDITED BY

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JUNE, 1889.

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Resume of Advantages.

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4. Being made with sugar of milk, one of them (if not taken whole) added to a little milk or other fluid is at once "broken up" and distributed throughout the liquid.

5. Pulverulent substances, like calomel, are by this means especially distributed well, and for the moment suspended throughout the fluid.

6. Being very small, and not globular, they are easy to swallow.

7. They do not harden and become insoluble with time, nor do they crumble, like pills.

8. They afford the advantages derivable from the administration of small doses repeated often, which are: 1. That if the drug be given in but little liquid, the absorbent power of the mucous membrane of the mouth and gullet are called repeatedly into requisition. 2. That if given on an empty stomach (as is generally desirable) unpleasant symptoms are avoided. 3. In case of idiosyncrasy, the doses can be stopped before large amounts have been given. 4. Administered in this way drugs are better tolerated than is otherwise the case.

9. A greater effect is alleged to be obtainable by this method from a small quantity of medicine than is possible by the usual plan.

10. In some cases Compressed Triturates are repeated as often as every five or ten minutes, and it is surprising *how soon a very small dose of medicine repeated often amounts to a very large quantity.*

11. If taken whole, one of the Compressed Triturates dissolves and falls to pieces in the stomach at once, and is never voided unchanged.

12. They afford accuracy of dose, without the trouble and annoyance of weighing or measuring.

13. They can be taken at any time and in any place, even when the patient is following his ordinary avocation.

14. They are only a few lines in thickness and about one-fourth the circumference of a lead pencil.

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Aconite Tinct.	1 min.	Anti-Constipation	Aloin 1-5 gr. Strych. 1-60 gr. Belladon. Ex. 1-8 gr. Ipcac. 1-16 gr.
Arsenious Acid	1-100 and 1-50 gr.		
Belladonna Tinct.	1 min.	Apomorphine Mur.	1-50 gr.
Calcium Sulphide	1-10 gr.	Atropin Sulph.	1-100 gr.
Capsicum Tinct.	1 min.	Digitalin	1-100 gr.
Digitalis Tinct.	1 min.	Euonymin Resin	1-8 gr.
Hydrarg. Perchlor.	1-100 gr.	Hydrarg. Iod. Rub.	1-20 gr.
Hydrarg. Cum Cretæ	1-3 gr.	Hydrarg. Iod. Vir.	1-8 gr.
Hydrarg. Subchlor. (Calomel)	1-10 gr.	Morphine Sulph.	1-20 and 1-8 gr.
Hyoscyamus Tinct.	1 min.	Opium Tinct. (Laudanum)	2 min.
Nux Vomica Tinct.	1 min.	Pilocarpin Mor	1-20 gr.
Tinct. Camph. Co. (Paregoric)	2 min.	Podophyllin Resin	1-4 gr.

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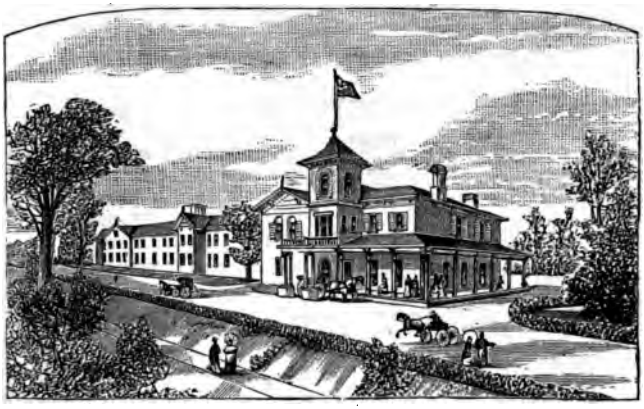

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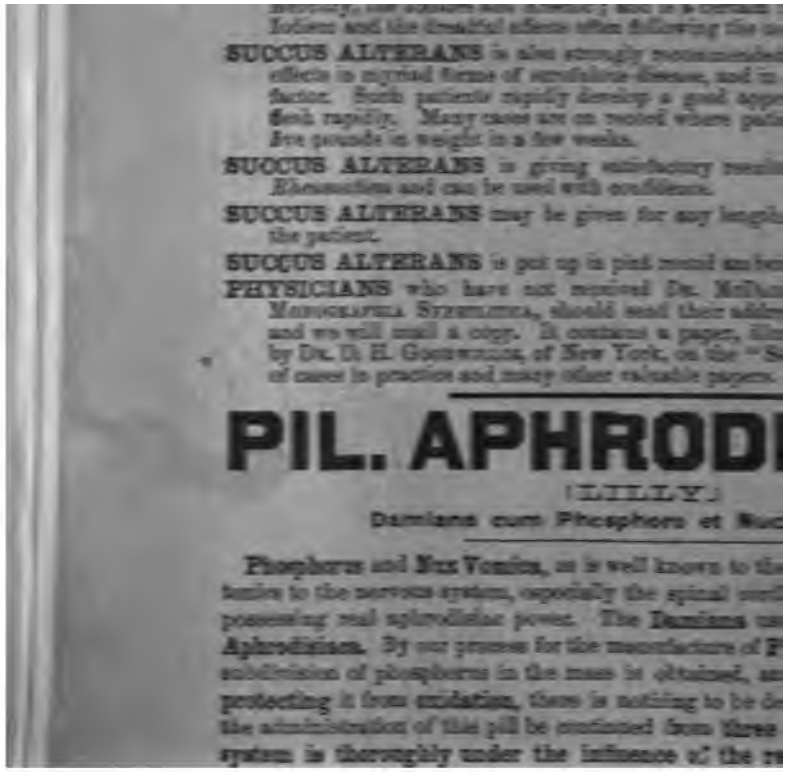

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